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ABSTRACT

A study of the implementation of national core curricula in Australia was undertaken by seeking the general views, through interview and questionnaire, of curriculum developers and Technical and Further Education (TAFE) teachers who develop and deliver the curricula. Views of representatives of industry and commerce who employ students who are trained using those curricula were also solicited. These general views were complemented by specific views obtained in three case studies. The role of the Curriculum Projects Steering Group (CPSG) in the implementation process was a matter of particular interest. Although the work of of the CPSG had the general support of both industry and bodies such as the Australian Council on Employment and Training, they also pressured it to make changes to its procedures. General conclusions reached were that the CPSG guided the development and implementation of national core curricula very well and, that in continuing its valuable work, its procedures should not be changed lightly. Nevertheless, several steps were recommended to improve the implementation of the national core curricula. (The three case studies that illustrate how the issues applied to a particular national core curriculum are described in detail, and appendixes include the study instruments, an outline giving minimum curriculum documentation requirements, and a table showing the nature and status of the national curriculum projects. A bibliography is included.)

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TAFE

TAFE NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT

AN EVALUATION OF THE IMPLEMENTATION OF NATIONAL CORE CURRICULA IN AUSTRALIA

Kevin J Parkinson

and

John S Broderick

U.S. DEPARTMENT OF EDUCATION
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AN EVALUATION OF THE IMPLEMENTATION OF NATIONAL CORE CURRICULA IN AUSTRALIA

KEVIN J. PARKINSON
JOHN S. BRODERICK

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FOREWORD

This project was undertaken by the TAFE National Centre for Research and Development at the request of the Australian Conference of TAFE Directors. Since 1971 when the project which compared the content of electrical trade courses in Australia and which led to the development of the concept of national core curricula was completed, there has been a remarkable increase in the number of national curriculum projects undertaken in Australia. By this year (1987), 97 projects of which 24 were complete, had been initiated.

Early in 1986 a member of the Australian Conference of TAFE Directors proposed that the development in national curriculum projects had been such that it was time that an evaluation with emphasis on the implementation of national core curricula was conducted. In response to that proposal, the Centre prepared a project brief which, after some amendment, was accepted by the Conference in March, 1986.

The project has been designed to give a broad view of the impact of national core curricula on TAFE across Australia particularly as this impact has affected employers, TAFE teachers and students. This overview view has been complemented by specific information derived from three case studies. From the total picture, developed during the project, recommendations to guide the future direction of national core curricula have been formulated.

A number of people have helped in the preparation of this report and the grateful thanks of the authors are extended to them all. In particular the assistance of the following is acknowledged.

- the members of the advisory committee whose names are listed elsewhere;
- the members of the Curriculum Projects Steering Group and TAFE core curriculum task forces who agreed to be interviewed, responded to questionnaires and commented on preliminary draft material; and
- the representatives of industrial and commercial associations and firms who were prepared to give their time to provide advice.

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ABBREVIATIONS

AAITC	Australian Automobile Industry Training Committee
ACET	Australian Council on Employment and Training
ACOTAFE	Australian Committee on Technical and Further Education
ACTA	Australian Council on Tertiary Awards
ACTD	Australian Conference of TAFE Directors
AEC	Australian Education Council
AIB	Australian Institute of Building
AIRDTC	Automotive Industry Research, Development and Training Centre
ANZRA	Australian and New Zealand Reciprocity Association
ASA	Australian Surveying Association
CPSG	Curriculum Projects Steering Group
CODAP	Comprehensive Occupational Data Analysis Programs
COSAC	Council of State Apprenticeship Committees
COSTAC	Commonwealth/State Training Advisory Committee
CRTS	Commonwealth Reconstruction Training Scheme
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTEC	Commonwealth Tertiary Education Commission
DEET	Department of Employment, Education and Training
DEIR	Department of Employment and Industrial Relations
FCAI	Federated Chamber of Automotive Industries

IAME	Institute of Automotive Mechanical Engineers
ITC	Industrial Training Committee
NCC	National Core Curriculum(a)
NCP	National Curriculum Projects
NMEITC	National Metal and Engineering Industry Training Committee
NRMITC	National Retail Motor Industry Training Committee
NTC	National Training Council
NTCDC	New Technology Course Development Centre
REIA	Real Estate Institute of Australia
REIQ	Real Estate Institute of Queensland
TAFE	Technical and Further Education
TAFEAC	Technical and Further Education Advisory Committee
TAFEC	Technical and Further Education Council
TRSC	Training Review Standing Committee of the National Training Council.
VACC	Victorian Automobile Chamber of Commerce

ADVISORY COMMITTEE

Dr. William C. Hall, Executive Director, TAFE National Centre for Research and Development, South Australia.

Mr. G.L. Mill, Chairman, Industrial and Commercial Training Commission, South Australia.

Mr. D. Rumsey, Director (Studies), Department of Technical and Further Education, New South Wales.

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EXECUTIVE SUMMARY

A study of the implementation of national core curricula was undertaken by seeking the general views, through interview and questionnaire, of curriculum developers and TAFE teachers who develop and deliver the curricula and of representatives of industry and commerce who employ the students who are trained using those curricula. These general views were complemented by specific views obtained in three case studies. The role of the Curriculum Projects Steering Group in the implementation process was a matter of particular interest.

With regard to the role of the Curriculum Projects Steering Group, it is noted that, while its work has had the general support of both industry and bodies such as the Australian Council on Employment and Training, there has been pressure upon it from such bodies to make changes to its procedures which would, for example, shorten lead times, vary priorities and impose national syllabuses upon TAFE authorities. Even if the outcomes sought by such changes were considered to be desirable, to suggest that they could be achieved in the short term in the Australian TAFE context is questionable. In particular, acceptance of national syllabuses by TAFE authorities will always be a gradual process based on persuasion.

The general conclusions reached were that the Curriculum Projects Steering Group has guided the development and implementation of national core curricula very well and, that in continuing its valuable work, its procedures should not be changed lightly. Nevertheless there are steps which could be taken to improve what is currently a very effective process. These steps are contained in the following recommendations which are directed to the whole question of the implementation of national core curricula. The role of the Curriculum Projects Steering Group is only one part of the question.

- Techniques of curriculum development such as:

    - a combination of the Delphi and DACUM processes;

    - the search conference method; and

    - nominal group techniques

be considered for use in the preparation of national core curricula particularly in those vocations which are undergoing change (Section 6.1.1).

- Before the Curriculum Projects Steering Group authorises a national curriculum project to proceed, a feasibility study be conducted to determine whether the conduct of the national curriculum project is justified.

  If the national curriculum project is justified, the feasibility study should specify

  - the aims of the project;
  - the approach (methods of management and techniques) to be used in the development;
  - the duration of the project (lead times); and
  - an estimate of the total resources required (including the cost of monitoring). (Section 6.1.2)

- The aims of any national curriculum project as proposed in the feasibility study and as accepted by the Curriculum Projects Steering Group be not varied without the agreement of the Group. (Section 6.1.2(a))

- When accepted by the Curriculum Projects Steering Group, the approaches to be used to achieve the aims be varied only with the agreement of the Group. (Section 6.1.2(b))

- The lead times of a national curriculum project, as approved by the Curriculum Projects Steering Group, be not varied without the agreement of the Group. (Section 6.1.2(c))

- The feasibility study take into account direct, indirect and opportunity costs and the implied costs of implementation and monitoring, when determining the total resources required for a national curriculum project. Such costs would include:

  - the cost of conducting an industrial training needs analysis;

  - opportunity costs such as those involved in taking staff from other projects which may have a higher priority in a TAFE authority;

  - capital costs of implementing a new, and probably technologically updated course;

  - the cost of developing suitable materials;

  - the cost of setting up a teacher network within the TAFE authority to facilitate implementation;

  - the cost of major equipment, such as special machines; and

  - the cost of monitoring. (Section 6.1.2(d))

- The Curriculum Projects Steering Group prepare a standard statement for national curriculum documents setting out the core nature of national core curricula. (Section 6.2.3)

- The documentation for national core curricula, as approved by the Curriculum Projects Steering Group, be accepted, as the standard method of documentation. This documentation include expected student competencies and be accompanied by nationally or cooperatively developed learning materials, such as texts and assessment methodologies. (Section 6.2.3)

- A method of monitoring the implementation of national core curricula which accommodates the responsibilities of the individual TAFE authorities be developed. (Section 6.2.5)

- The Australian Conference of TAFE Directors agree that:

  - the period of shared monitoring between the individual TAFE authorities of national core curricula implementation be the first two years from the date of approval to implement by the Conference.

  - the relevant task force convener be responsible for monitoring the implementation, and for that purpose to make one visit to each relevant TAFE authority in each of the two years following the date of approval in order to observe implementation of the national core curriculum and to prepare a report on that implementation.

  - each TAFE authority be requested to establish a small local group to check and accept or amend the report of the task force convener on the implementation of the national core curriculum in that authority. The local group should comprise the Curriculum Projects Steering Group member of that TAFE authority (or nominee) as chairperson, a senior curriculum advisor, the relevant national core curriculum task force member, a senior TAFE person in the study area, preferably with responsibility across the whole authority, and two industrial/occupational representatives, preferably with experience on TAFE/industry advisory committees.

  - the task force convener tender the report on implementation of the national core curriculum in each relevant TAFE authority to the Curriculum Projects Steering Group together with a consolidated report for approval for submission to the Australian Conference of TAFE Directors. (Section 6.2.5)

. One role of the Curriculum Projects Steering Group in the maintenance of relativity of standards between the states/territories be to encourage task forces to arrange for the registration of national core courses as conducted by the different states/territories with the Australian Council on Tertiary Awards. (Section 6.3.2)

. Nationally determined student assessment item banks be developed as integral parts of national core curricula and be lodged with the National TAFE Clearinghouse. (Section 6.3.3)

. The Curriculum Projects Steering Group arrange for examination papers and a random selection of student scripts in national core courses to be exchanged on a national basis. The examination papers should be lodged with the National TAFE Clearinghouse (Section 6.3.4)

. All national curriculum projects should be preceded by a nationally determined industrial needs analysis. (Section 6.3.5)

. The Curriculum Projects Steering Group examine the possibilities of each TAFE authority appointing external moderators with suitable educational experience for each national core course and for the reports of the moderators to be submitted to the Group. Where the reports of the moderators indicate that any considerable variation in standard exists between the TAFE authorities or from the expected degree of relevance to existing industrial or commercial practice, those variations be taken up with the TAFE authority concerned. (Section 6.3.6)

- The state/territory TAFE authorities, through the Australian Conference of TAFE Directors, agree to allocate for the maintenance of course standards, portion of recommended grant of the Commonwealth Tertiary Education Commission for the 1988-90 triennium for the purpose of quality improvement. (Section 6.3.6)

- When a task force or advisory committee is formed to undertake a national curriculum project the Curriculum Projects Steering Group should consult with the appropriate employer organisation on the representation the industry should have on that task force or advisory committee. (Section 6.6.2)

- In selecting national core curriculum projects, the demands of the national interest be considered during the feasibility study. In particular, views of the Australian Council on Employment and Training and the appropriate national industry training committees be sought. (Section 6.7.2)

- The number of projects undertaken in any one period be limited to those which can be completed according to the specifications of the feasibility study and within the funds available. (Section 6.7.1)

- The Curriculum Projects Steering Group establish procedures to ensure that all recommendations placed before it are considered, all decisions on those recommendations documented and disseminated to those affected by the decisions and, where appropriate, action taken to implement the decisions. (Section 6.7.3)

- The view of the Commonwealth Tertiary Education Commission that the Commonwealth Government should operate in partnership with the states to support quality of TAFE provision be accepted. (Section 6.8.1).

- The Secretariat of the Curriculum Projects Steering Group and task force conveners (or other designated officer where other management methods are used) deposit all relevant documentation with the clearinghouse officer in the appropriate local TAFE authority. (Section 6.8.2(f))

1. INTRODUCTION - BACKGROUND AND DEFINITION

1.1 Background

This is not the first evaluation of the implementation of TAFE core curricula in Australia. In February 1982, Jones (1982) prepared a proposal which included the following aims:

- to appraise the educational literature in order to identify the educational advantages to TAFE, and any other implications for TAFE, of developing curricula in accordance with the concept of core;
- to describe and analyse comparatively the curriculum development and implementation models adopted in Australian TAFE in respect to the core curriculum projects undertaken to that time;
- to propose a core curriculum development model or range of models for the development and implementation of core curriculum undertakings in Australian TAFE.

The terms of reference for the project were approved by the Board of Directors of the TAFE National Centre for Research and Development in February, 1982 and the report (Jones, 1983) was published in 1983.

In the four years since that report there has been a quite remarkable increase in the number of co-operative national curriculum projects (NCP) (including national core curricula, NCC) undertaken in Australia. These projects have been managed by the Curriculum Projects Steering Group (CPSG), a standing committee of the Australian Conference of TAFE Directors, (ACTD), partially funded by the Commonwealth Tertiary Education Commission (CTEC) and serviced by various national task forces and the TAFE National Centre for Research and Development.

The primary objectives of NCP, as defined by the Commonwealth State Training Advisory Committee (COSTAC), are:

- to make effective use of scarce national resources;
- to facilitate movement of TAFE students between various TAFE authorities;
- to facilitate recognition of award holders throughout Australia; and

- to provide a basis for the development of minimum national training standards (COSTAC, 1987)

Early in 1986 a member of the ACTD proposed that the development in NCP had been such that it was timely for a further evaluation with emphasis on the implementation of NCC to be conducted. In response to that proposal, the TAFE National Centre for Research and Development prepared a project brief which, after consideration by the Research and Development Committee of the Centre and comment from the original proposer, was submitted in an amended form to the ACTD. The project brief as submitted was supported by the ACTD at its March 1986 meeting. (ACTD, 1986).

1.2 Definition

The definition of NCC used in this study is that of Jones (1983). NCC is defined:

- as a concept referring to a TAFE course provided for a single study area, where a core of knowledge, skills and curriculum practices has been agreed upon by TAFE Authorities as being common to the programs conducted by each TAFE Authority (p. 1).

According to Jones this definition of NCC has three notable features:

a) An NCC comprises, at the least, national core syllabus documentation (ie. a description of national core aims, structure, content and/or objectives). This NCC syllabus documentation serves as a flagship to the NCC and as a useful platform from which other curriculum developments can be made and from which other curriculum negotiations can be built.

b) An NCC may also comprise a core of curriculum practices - that is to say, TAFE Authorities may agree to adopt a core of teaching methodologies, teaching resources, assessment practices, etc., on a national basis, as well as a core syllabus.

c) The NCC concept is dependent upon the 'agreement' notion. Essentially, whatever curriculum development products, characteristics or practices TAFE Authorities choose to agree upon as being common, constitute the NCC. How agreement is reached, or how the range of curriculum elements comprising the core is determined (whether by survey, questionnaire, group consensus or otherwise), is

> not important to the definition of NCC. National agreement is the key. Implicit in this feature of the definition is the commitment made by each TAFE Authority to strive to adopt all components of the NCC. (p.1).

1.3 Some general observations in relation to the conduct and management of NCP

Hall (1986) commented that certain facts in relation to the conduct and management of NCC were generally accepted. He suggested that:

a) the theory of national curriculum development resting heavily as it does on a more economic use of the limited financial and human resources available to Australian TAFE is sound;

b) the practices adopted for national curriculum development, in particular the task force approach, have met with varied successes in achieving the intended goals;

c) at the levels of the individual TAFE authority, the CPSG and the ACTD, there is concern being expressed with the proliferation of new national projects, as well as with the cost of supporting the work (often including attendance at interstate meetings);

d) notwithstanding (b) and (c) above, the CPSG managed program of national curriculum development has contributed greatly to an increased interest and participation in, as well as commitment to, national TAFE projects by individual TAFE authorities, and to an enhancement of the image of national TAFE among many observers and client groups; and

e) there has been a strengthening, certainly by those who have been directly involved in NCC task forces and other national curriculum development activities, of the view that the benefits to be gained from this kind of project are considerable. Among these are the benefits to staff arising from sharing in both the development and trialling of instructional materials such as texts, assessment methodologies, practical assignments and audio visual aids in a designated TAFE study area at a national level and the reduced long-term cost of curriculum revision.

During 1984 and 1985, there was considerable debate at CPSG meetings concerning the time required and cost to produce national curriculum products and consequently the most efficient approaches to such projects. During this debate, reference was made to various reports, including Jones (1983), as well as a number of other submissions and papers presented by CPSG members and other TAFE officers. The CPSG thus demonstrated a keen interest in promoting a variety of development techniques and management approaches. As well, consideration was given to the findings of Kenworthy and Schilling (1984), in which a number of models were proposed for the development of instructional materials for TAFE nationally. However the really crucial issues have been those of the implementation of NCC and whether the curriculum development methods and management approaches used have helped or hindered that implementation. These are the principal issues considered in this evaluation.

2. THE AIMS OF THE PROJECT AND THE APPROACH TO MEETING THOSE AIMS

The total approach to the project is represented in the flow chart (Figure 1). In the general part of the study, an historical background to the development of NCC was prepared from a number of data sources and views on NCC were sought from senior TAFE officers in the administration and colleges. In the particular part of the study, more specific information was sought in three case studies, the project findings were developed and recommendations formulated.

2.1 Aims of the project

The project had the following aims:

a) to consider and to compare the range of alternative approaches to national core curriculum (NCC) development;

b) for selected NCC, to evaluate the extent of the implementation of national core curricula in all states/territories;

c) for selected NCC, to evaluate the impact NCC has had on maintenance of standards between colleges and between authorities;

d) for selected NCC, to evaluate the cost effectiveness of developing and implementing core curricula;

e) to evaluate the benefits to students and to teachers of national core curricula;

f) to gather the opinions of selected representatives of industry/commerce to relevant national core curricula;

g) to evaluate the role of CPSG set up by the Conference of TAFE Directors, in the development and implementation of NCC.

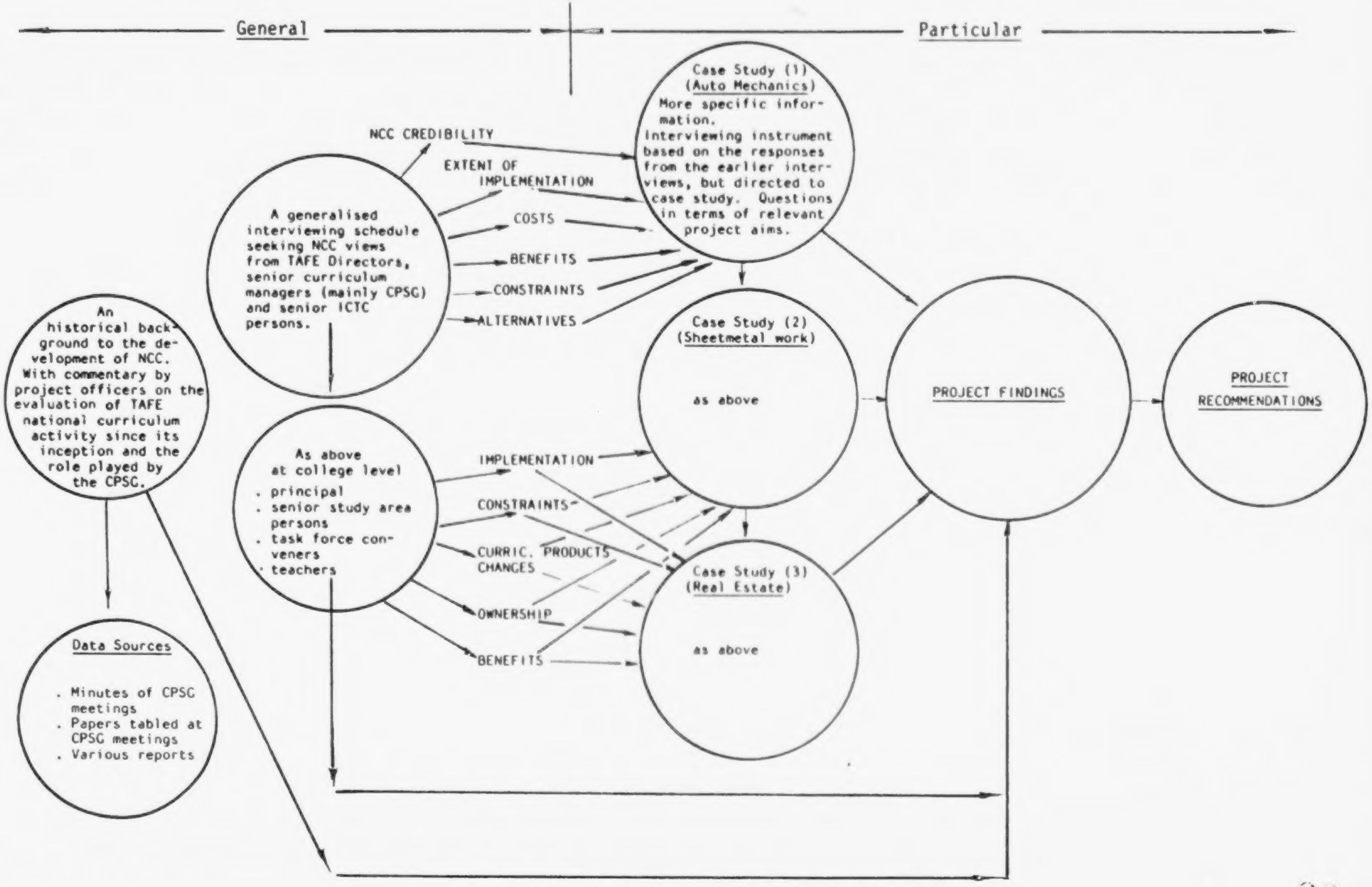
General
Particular
Case Study (1)
(Auto Mechanics)
More specific information.
Interviewing instrument based on the responses from the earlier interviews, but directed to case study. Questions in terms of relevant project aims.
NCC CREDIBILITY
EXTENT OF IMPLEMENTATION
COSTS
BENEFITS
CONSTRAINTS
ALTERNATIVES
A generalised interviewing schedule seeking NCC views from TAFE Directors, senior curriculum managers (mainly CPSG) and senior ICTC persons.
An historical background to the development of NCC. With commentary by project officers on the evaluation of TAFE national curriculum activity since its inception and the role played by the CPSC.
Case Study (2)
(Sheetmetal work)
as above
PROJECT FINDINGS
PROJECT RECOMMENDATIONS
As above at college level
. principal
. senior study area persons
. task force conveners
. teachers
IMPLEMENTATION
CONSTRAINTS
CURRIC. PRODUCTS CHANGES
OWNERSHIP
BENEFITS
Case Study (3)
(Real Estate)
as above
Data Sources
. Minutes of CPSC meetings
. Papers tabled at CPSG meetings
. Various reports

Figure 1
FLOW CHART OF PROJECT METHODOLOGY

2.2 The method of presentation

The discussion is both cyclical and thematic. With the exception of the next chapter which deals with the development of the concept of NCC, within each chapter each of the aims is treated in turn. Within each aim a number of themes emerge and each of these is treated independently. For example, 'monitoring' is a theme relevant to an evaluation of the impact NCC has had on the maintenance of standards. This theme can be traced through each chapter.

2.3 The clarification of the aims

The aims are of such a general nature that findings which are consistent with them could be made and yet these findings still be irrelevant to the interest of the commissioners of the report, namely the members of the ACTD.

Consequently, it was decided to conduct a series of open ended interviews with senior officers in the TAFE administrations. These interviews were designed to determine, within the constraints of the aims of the project, the questions to which senior officers would be expecting answers.

The structure of the TAFE authorities in Australia, although differing in detail, is very similar and can be represented as shown in the example in Figure 2.

Interviews were conducted with the heads of the TAFE administrations in Victoria, South Australia, Tasmania and the Australian Capital Territory, one of the deputy heads in New South Wales and the head of the Industrial and Commercial Training Commission in South Australia. In addition, principals and relevant staff of the three South Australian TAFE colleges which were the principal providers in that state of the study area of real estate, sheetmetal and automotive mechanics were interviewed. These study areas were the topics of case studies.

As a result of these interviews the most important questions relating to the aims of the project as understood by senior TAFE officers were identified.

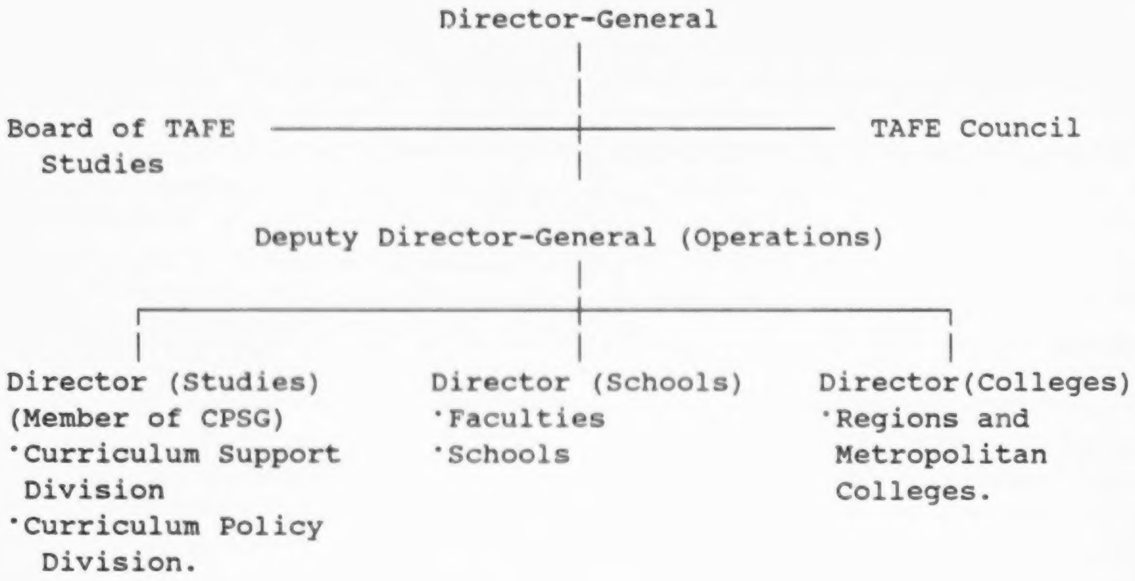
Director-General
Board of TAFE Studies
TAFE Council
Deputy Director-General (Operations)
Director (Studies)
(Member of CPSG)
·Curriculum Support Division
·Curriculum Policy Division.
Director (Schools)
·Faculties
·Schools
Director(Colleges)
·Regions and Metropolitan Colleges.

FIGURE 2.

MODIFIED ORGANISATION CHART - NSW TAFE, OCTOBER 1986.
Source: Cavalier (1987)

2.4 Document analysis

The principal sources of data were the minutes of CPSG meetings, papers tabled at those meetings and reports such as Jones (1983) and Kenworthy and Schilling (1984). The documents were searched and information relating to the development of the concept of NCP and to the specifications of the project extracted.

The development of the concept of NCC from the earliest attempts at curriculum cooperation to the formation of the CPSG is discussed in chapter 3. In chapter 4 each of the aims of the project is considered in terms of the information obtained in the document analysis.

The actual papers tabled at the meetings of the CPSG are not identified in the text since the potential existed to distort the deliberations of the CPSG. The papers used were those prepared by Mathers (1983a, 1983b, 1985), Stevenson (1985), Innes (1985), Weatherhead (1985) and Timbs (1985).

2.5 The interviewing instrument (Appendix A)

The interviewing instrument was prepared to obtain views on the most important questions relating to the aims of the project as understood by senior TAFE officers.

The approach taken was general and was designed to obtain information on the respondents' knowledge of NCP, including NCC, and, also to gauge the degree of their implementation in the states/ territories. The instrument also sought opinions of respondents on a number of aspects of national curriculum activity related to the seven aims of the project.

The project officers conducted interviews with major stakeholders, that is with members of the CPSG. Before the interview, each member was sent a letter seeking assistance in the project (Appendix B), together with a copy of the interviewing schedule and an invitation to write brief responses to all or some of the questions before interview.

The responses to the interview, together with any written responses were content analysed and classified in accordance with the seven aims of the project. These responses are discussed in chapter 5.

2.6 The case studies

It was decided to investigate the issues raised in the aims of the project by using a case study approach to illustrate how these issues applied to particular NCC. The three NCC chosen for the case studies were:

- automotive mechanics basic trade course;
- sheetmetal work basic trade course; and
- real estate.

These case studies were chosen in order to observe, within the constraints of the project, some different curriculum development techniques and a range of subject types in order to provide some basis for generalisation.

Automotive mechanics basic trade was chosen because the curriculum demands are likely to be relatively common across the states/territories. Furthermore, the approach followed has become common practice for the preparation of an NCC, that is the CPSG receives a proposal for a project, agrees to it and appoints a task force to undertake it The task force bases its work on the existing courses in the states/territories. However, there was one important difference from the common practice - an industrial needs analysis was carried out after the NCC was prepared. This is case study A.

The sheetmetal work basic trade course was chosen because in origin it did not follow the pattern which has become common in the development of NCC: it was not an NCC, rather it was an NCP. It began as a cooperative project among sheetmetal work lecturers to develop national teaching/learning resources. This is case study B.

To ensure a balanced perspective, it was decided to investigate a nationally developed course in business studies. Real estate was chosen because its implementation as an NCP might well have impeded by the differing demands of state/territory licensing authorities. This is case study C.

2.7 The case study questionnaire (Appendix C)

As a consequence of the responses to the interviews, a case study questionnaire was developed. This case study questionnaire was administered to the TAFE officers who were involved with the development and/or implementation of the NCC used as case studies and to members of the CPSG. The responses to the questionnaire were content analysed.

2.7.1 TAFE officers who were involved with the development and/or implementation of the NCC used as case studies

The approach was twofold. A number of TAFE officers were interviewed, as well as being asked to complete the questionnaire. Other TAFE officers were posted the questionnaires and asked to complete them. The national cover of the questionnaires is shown in Table 1.

TABLE 1
NATIONAL COVER OF THE CASE STUDY QUESTIONNAIRE

STATE/ TERRITORIES	NSW	VIC	QLD	SA	WA		NT	ACT
COURSE								
Automotive Basic Trade	Sydney*	TAFE Board* Richmond* Batman* Goulburn Vlly.	TAFE Curriculum	TAFE Curriculum Kingston	TAFE Curriculum	Burnie	Darwin	Canberra
Sheetmetal Basic Trade	North Sydney*	Richmond*	Eagle Farm Yeronga	Regency	TAFE Curriculum	Launceston	Darwin	Canberra
Real Estate	Sydney*	RMIT* Prahran*	Eagle Farm	Adelaide Kensington Park	TAFE Curriculum	Hobart	Darwin	Canberra

* Interviews

2.7.2 Members of the CPSG

Although members of the CPSG were interviewed using the interview instrument, the responses were of a general nature and could not be easily applied to the case studies. Following the more specific responses obtained from the other respondents to the questionnaire, it was considered that, in order to obtain a balance of opinions between the curriculum managers and those who had participated in the development and implementation of the case studies, CPSG members should be asked to respond to the questionnaire also.

2.8 Discussion and recommendations

The discussion of the information obtained from the interviews and questionnaires has been used as a basis for recommendations to the ACTD on each of the aims. The discussion and recommendations are contained in chapter 6.

3. THE DEVELOPMENT OF THE CONCEPT OF NCC

In Australia the various TAFE authorities have been established under state/territory governments and the responsibility for the operation of TAFE (including development of curriculum) lies with those governments. Nevertheless, in some areas of TAFE operations, Commonwealth Government funding through the CTEC does directly impinge on TAFE.

In the area of curriculum development in particular, TAFEC in its advice to the CTEC for the 1985-87 triennium (CTEC, 1984b) reported that, in 1983, $6.3million of Commonwealth particular purpose grants was spent on curriculum development. It noted that, during the 1970s, co-operation was established between the states in a limited number of core curriculum projects and that, since 1980, these activities had gained momentum. It referred to the investigation of the development and implementation of NCC by Jones (1983), to the favourable findings of this study and to the support given by the states to joint curriculum development, and, recommended support for an expanded range of such activities. The necessity for this joint curriculum development was reiterated in the report of TAFEAC for the 1988-90 triennium (CTEC, 1987c).

3.1 The development of the understanding of the need for co-operation between TAFE authorities

An important factor underlying this national co-operative curriculum activity in Australia is the complete freedom of each of the eight TAFE authorities to accept curricula as developed or modify or reject any curriculum products, processes and practices developed by the co-operative efforts of Australian TAFE authorities.

The independence of the states and territories is reflected in their institutions and such independence is enshrined in the Commonwealth of Australia Constitution Act of 1900. This independence is carefully guarded by all TAFE authorities in Australia. Although there are many similarities among the various education systems and TAFE departments in Australia in organisational structures, administrative procedures, curricula content and levels of study, there are differences which reflect the unique features characterising the evolutionary growth of the Australian colonies, later to become the states and territories of a federated Australia.

Technical education and training in Australia in the period from federation to the Second World War was the responsibility of the technical branches of the state education systems. Industrial growth in Australia, although growing at a steady rate (except for the Great Depression years), was not significant and the size and structures of the technical branches reflected this situation. In the late 1930s the industrial growth accelerated somewhat with the approach of the war and the role of the technical branches of the state education systems changed to meet the technical education need and demand. These changes in the role and scope of the technical branches was more evident in the more populous Eastern states.

Following World War II, Australia experienced unprecedented industrial growth, which called for concomitant changes in the role of the technical branches of the state education systems.

In 1949 New South Wales found it necessary to legislate for the establishment up of a separate Department of Technical Education (which in 1974 became the Department of Technical and Further Education) to cater for the need and demand for better educational responses to the now accelerating industrial/ technological growth. However, the other states continued to meet the growing industrial education and training needs and demands through the technical branches of their education departments.

The post-war economic and social structural changes and the responses of the state education systems to meet them, called for some consultation on technical education and training between the state administrators of technical education. Those consultations and exchanges of views took place in collaboration with representatives of the Commonwealth Government of the time, which was putting into effect the Commonwealth Reconstruction Training Scheme (CRTS) for the training of ex-service personnel. The key element of these meetings of state administrators of technical education, was the co-ordination of CRTS.

... Meetings for this purpose led some TAFE administrators to see value in regular consultation and exchange of views ...
(Jones, 1983, p. 33).

However, by the early 1950s the meetings among the state administrators had ceased and the Australian technical education administration lapsed more or less into isolation each state developing a technical education system to suit its own particular needs.

From 1956 to 1962 technical education administrators met on only three occasions, but from 1962 began to meet annually. This was the forerunner of the present ACTD which currently meets three times each year.

Even though senior TAFE administrators continued to meet annually from 1962, there was, for many years, no formal national co-operation between the states/territories in the area of curriculum development. However, the concept of common national syllabuses had been discussed by the TAFE directors for some time, especially in the early 1970s. Their views on the concept of national common syllabi were recorded at the 1972 Conference of TAFE Directors as:

> ... the Directors have been working consistently towards common national syllabi over many years and ... there is continual exchange of syllabi and material between States. In fact in many trades there is considerable similarity already ... However, the Directors consider that in general, it is more desirable to aim at conformity of principles and reciprocity of qualifications, rather than attempt to establish common syllabi with their inherent drawbacks of uniformity and rigidity ... (Sherwood, 1973, p. 23, cited in Jones, 1983, p. 39).

At that stage of the development of the concept of national common curricula, the main thrust was on common core content, mobility of students and graduates and reciprocity of qualifications. The main disciplines under consideration were in trades requiring statutory registration and licensing of trade operators e.g. the electrical and plumbing trades.

3.2 Factors leading to curriculum co-operation between the TAFE authorities

3.2.1 The Kangan reports

The need for technical education and training to meet effectively the expanding needs of Australian industry and commerce and the Australian society as a whole, led to the Commonwealth Government setting up the Australian Committee on Technical and Further Education (ACOTAFE) under the chairmanship of Mr. M. Kangan. Reports from the ACOTAFE Committee were published in 1974 and 1975 and were known as the Kangan Reports. One of the most important outcomes of the reports was the enactment by the Commonwealth of the Technical and Further Education Act of 1974, which legally stamped the title of technical and further education (TAFE) on Australian technical education training, and a large area of what was loosely called adult education.

South Australia chose the more generic name of "further education" as the title of the new separate department, which replaced the Technical Division of the South Australian Education Department. With the passing of state legislation in 1974, the new department was declared a legal entity although it had already commenced operating separately from the South Australian Education Department in 1972. The name of the Department changed from Further Education to TAFE in the recent past, as the latter title was by then recognised and accepted nationally. The early 1980s saw the establishment of the Victorian TAFE Board as a separate authority to administer technical and further education in that State. The other states and territories have restructured their technical divisions of their education departments into divisions of TAFE within the respective Education Departments.

3.2.2 The demand for relevant TAFE courses

Prior to, and during the period of the ACOTAFE investigations, all technical and further education authorities were looking into the relevance of their vocational courses to the technical education and training needs of Australian industry and commerce. The result was better periodic reviews of vocational courses which, in a number of cases, became based on industrial and commercial surveys and occupational analyses. At the same time as these industrial surveys and occupational analyses were being conducted, better formal interface structures between TAFE authorities and industry and commerce were also established. In the main, the formal structures took the form of more representative joint TAFE/ industry standing advisory committees on vocational curricula development. From these formal structures, informal associations were formed at various levels of the interface.

3.2.3 Portability of qualifications

Contrary to the conventional wisdom, Jones (1983) found that, in general, the need for NCC to provide greater mobility for students was negligible and that the need to provide for the mobility of course graduates was not high. Therefore, Jones considered that the mobility issue was not a major one in any rationale for establishing NCC. Even so, many groups are interested in greater mobility of course graduates through reciprocity of qualifications.

a) The role of licensing and registration statutory authorities

The concern of licensing and registration statutory authorities within the states/territories for the establishment of reciprocity agreements on trade standards, processes and practices across the nation (and in certain cases including New Zealand) was based on the assumption that there was a fair degree of mobility among tradespeople. Two specific examples were the electrical and plumbing trades, both of which require tradespeople to be registered and licensed within the respective states and territories. The registration and licensing statutory authorities representing these two trades have, with the full support of the relevant employer and trade union associations attempted to establish common industrial codes of practice. These codes are, in effect, industrially-led approaches to the concept of a national core of trade standards expressed through mutually agreed trade applications.

One outcome of the concern for reciprocity of qualifications and for a national core of trade standards has been the report of the plumbing national curriculum project (DFE, 1976). It was recommended that a committee of plumbing educationalists be set up and directed to:

> Discuss and further investigate the terms: 'common core subjects', 'common core subject topics', and to set up a proposed 'common core plumbing apprentice basic course curriculum', which may be used in the interchangeability, accreditation or reciprocity of Plumbing, Gas fitting and Draining Courses at the basic plumbing apprentice trade level throughout Australia (p. 19).

The TAFE Directors approved the recommendation and commissioned a national conference of plumbing representatives to:

(i) identify and classify the elements of General Plumber's training which are common to all Australian states;

(ii) identify core subjects and common core subject topics in all apprenticeship plumbing courses;

(iii) report on the feasibility of common subject titles;

(iv) compare text books and course notes used by the Schools in each State; and . . . to develop a basic common core plumbing curriculum for apprentices, as it relates to interchangeability, accreditation or reciprocity . . . for all Australian States;

(v) determine the scope, content and depth of common core subject topics . . . (Oorloff, 1980, cited in Jones, 1983, p. 35).

Another outcome of the concerns of the registration and licensing statutory bodies was the establishment of the Electrical Trades Review Committee the charter of which included a request to:

(i) consider and agree on the depth of treatment of the core topics . . .;

(ii) devise subject titles, together with appropriate definitions of the topic content of these titles, so that equivalence of the courses offered by the various States can be established irrespective of possible variations in the individual subject contents;

(iii) devise a core of studies together with the accepted level of achievement required in order to obtain interstate reciprocity of qualifications and to endeavour to develop a standard form on nomenclature (Electrical trades review committee working party, cited in Jones, 1983, p. 35).

b) Professional associations

Jones (1983) pointed out that, notwithstanding the general finding that mobility was not an issue, the portability of qualifications for tradespersons of the regulated trades at the basic level, was of importance to professional associations. For example, interviews with heads of Schools of Plumbing in NSW and SA and members of the Australian and New Zealand Reciprocity Association (ANZRA) (a national body consisting of representatives from the statutory regulatory plumbing authorities) did reveal that, at the present time, the mobility of registered and licensed plumbing journeymen and masters was as far as they were concerned a key factor for the development of the TAFE national common core syllabus in plumbing, gas fitting and draining and its industrial counterpart, the national model core code of trade applications.

The Australian Institute of Building (AIB) publishes a list of courses which provide full exemption from its licenciate membership examinations. The technician level certificate in each state/territory meets the criteria and is recognised by the AIB (AIB, 1982).

c) National employers

Further evidence supporting the portability of qualifications as a factor in the rationale for developing NCC lies in the attitudes of industry where mobility of course graduates across Australia and national recognition of qualifications, assume high importance. For example, apparently, because of lack of portability of qualifications, large corporations which operate on a national scale have found it necessary to establish their own training centres since a common core of technical knowledge and skills is often required by company technicians to ensure their mobility across national operations. Employer attitudes to the question of portability of qualifications are discussed again in the case studies.

d) Industrial awards

Broderick (1985) in his comparative analysis of post-trade courses relevant to the oil industry pointed out that certain courses were accepted in the Engineering (Oil Companies) Award for additional wage payments above the basic award rate. One such schedule is shown in Table 2. It will be noted that if a qualification from a particular TAFE authority was not accepted in the award, the holder of the award was subject to a financial penalty.

TABLE 2

ENGINEERING OIL COMPANIES AWARD 1983

POST-TRADE COURSES REQUIRING NOT LESS THAN 2-3 YEARS PART TIME STUDY AND HAVING A DURATION OF 200-500 HOURS TOTAL

STATE	PROCESS INSTRUMENT MECHANIC		ELECTRICAL FITTER/MECHANIC		FITTER/WELDER/BOILERMAKER	
	COURSE NAME	ED AUTHORITY	COURSE NAME	ED AUTHORITY	COURSE NAME	ED AUTHORITY
QLD.	INDUSTRIAL ELECTRONICS COURSE 'C' ELECTRICAL COURSE 'D'	ED. DPT. OF QLD DIV. OF TAFE ED. DPT. OF QLD DIV. OF TAFE	INDUSTRIAL ELECTRONICS COURSE 'C'	ED. DPT. OF QLD DIV. OF TAFE	MECHANIC COURSE 'B' MECHANICAL COURSE 'E' MECHANICAL COURSE 'C' WELDING SUPERVISOR'S COURSE SERVICE COURSE IN WELDING TECHNOLOGY	ED. DPT. OF QLD. DIV. OF TAFE ED. DPT OF QLD DIV. OF TAFE ED. DPT. OF TAFE DIV. OF TAFE ED. DPT. OF QLD DIV. OF TAFE
VIC.	INDUSTRIAL ELECTRONICS	TAFE BOARD OF VICTORIA	INDUSTRIAL ELECTRONICS	TAFE BOARD OF VICTORIA	TOOLMAKING INDUSTRIAL PNEUMATICS INDUSTRIAL HYDRAULICS FITTING AND MAINTENANCE WELDER CERTIFICATION	TAFE BOARD OF VICTORIA TAFE BOARD OF VICTORIA TAFE BOARD OF VICTORIA TAFE BOARD OF VICTORIA TAFE BOARD OF VICTORIA
N.S.W.	INDUSTRIAL ELECTRONICS INDUSTRIAL INSTRUMENTS	DPT. OF TAFE N.S.W. DPT. OF TAFE N.S.W.	INDUSTRIAL ELECTRONICS	DPT. OF TAFE N.S.W.	ELECTRIC ARC WELDING INDUSTRIAL HYDRAULICS AND PNEUMATICS ENGINEERING TRADE METALLURGY (ADVANCED)	DPT. OF TAFE N.S.W. DPT. OF TAFE N.S.W. DPT. OF TAFE N.S.W.
S.A.	INDUSTRIAL ELECTRONICS	S.A. DPT. OF TAFE	INDUSTRIAL ELECTRONICS	S.A. DPT. OF TAFE	ADVANCED GENERAL MACHINING	S.A. DPT. OF TAFE
W.A.					WELDING OPERATIONS CERTIFICATION COURSE	ED. DPT. OF W.A. DIV. OF TAFE

3.3 The first national core curricula

3.3.1 The electrical course

From the TAFE viewpoint the origins of the concept of national core curricula emerged from a report tabled at the 1971 Conference of TAFE Directors. The report, entitled Comparison of content of Electrical Trade Courses in Australia, was prepared by the Technical Education Branch of the Queensland Department of Education. The purpose of the report was to gain a more detailed comparative analysis of existing electrical trade course syllabuses in Australian TAFE. The Conference also received a first submission on this issue from the Regulatory Authorities Licensing Committee (an inter-state sub-committee of a committee of senior electricity authority personnel which was formed in 1966). Following the submission of a more comprehensive request, approval was given by the Conference of TAFE Directors in 1974 for the establishment of an Inter-TAFE Authority Electrical Trades Review Committee to examine the development of a national common core course for the electrical basic trades in Australian TAFE. The first meeting of the committee was held in 1975. A major outcome of the work of this committee was the publication of a national text for electrical trade courses across Australia.

3.3.2 The plumbing course

With the investigation into the need for a common core course in basic trade electrical technical education under way, the Conference of TAFE Directors turned their attention to the plumbing industry. At the 1974 Biennial Conference of TAFE Directors held in Perth, it was resolved to examine the need for a common core course in the basic trade technical education and training for apprentices in the plumbing industry and to look into the ". . . feasibility of interchangeability, accreditation and reciprocity of Basic Trade courses in Plumbing, Gas fitting and Drainage" (DFE, 1976, p. 2).

The administration of the plumbing national curriculum project lay with a small committee from the staff of the School of Plumbing in Adelaide. The initial meeting of all state/ territory plumbing trade representatives took place in Adelaide in March 1976 and a report on the findings was submitted to the Conference of TAFE Directors held in Sydney in October, 1976 (DFE, 1976). The directors granted approval for a second and final meeting, which was held in Adelaide in 1976 and an 'Addendum Report' recommending a common core course content was written. This common core course was later approved by the TAFE directors. It is of interest to note that the all state/ territory plumbing representatives at the 1976 conference recommended to the TAFE directors that some form of national clearinghouse be established to publicise existing plumbing trade learning materials among the TAFE authorities with the object of sharing these resources. The Conference of TAFE Directors also approved this recommendation. Although some exchange of plumbing learning materials did occur among the TAFE authorities, the need was superseded when four illustrated volumes of plumbing texts were published by the MacGraw-Hill Publishing Company, working in collaboration with plumbing representatives from most of the Australian TAFE authorities. These have been approved by all TAFE authorities as acceptable national learning texts for the basic technical education of plumbing apprentices.

3.3.3 The carpentry and joinery course

The movement toward the development of national core content syllabuses increased when the TAFE Directors approved the formation of a National Building Studies Conference, which held its first meeting in 1976 and ...

> recommended that the development of a National Core Syllabus for Carpentry and Joinery students be examined. (Jones, 1983, p. 34).

3.3.4 General characteristics of the first NCC

Jones (1983) points out (pp. 34 - 35) that two of these early ventures into national curricula activity had three features in common: they were all devoted to an apprenticeship study area, the quality of work performed was governed by state/territory regulations or legislation and that the finished work was subjected to inspection by the appropriate state/territory licensing or regulatory body. Hence, in view of this common element, it seemed to be a natural outcome of the original national curriculum activity to concentrate on the feasibility of interchangeability, accreditation and reciprocity of basic trade courses.

3.4 The development of NCC in other study areas

Although the regulated and licensed trade areas, with the strong support of and prompting by the regulatory authorities for national core curricula to be developed, were the 'advance guard' of the national core curriculum concept, other study areas were soon being considered by TAFE.

The first move away from the general rationale of the need for mobility of tradespeople in the development of national core curricula occurred in 1979, when the TAFE directors approved the establishment of a National Working Party on Metal Trades, which in 1980 set up a national task force to develop a national core course in fitting and machining. Rather than a concern with mobility, the main areas of concern were the identification of the degree of commonness in the then current TAFE basic trade course in the fitting and machining across all TAFE authorities and the establishment of a general process for the efficient development of NCC in Australian TAFE (Jones, 1983, p. 36).

Since then, NCC have spread out far wider than the common core content concept related to the regulated trades and the rationale has changed well beyond interchangeability, accreditation and reciprocity of electrical and plumbing qualifications. By February, 1983, the CPSG was advertising in the open press for possible national curriculum projects for the 1984 program. The first paragraph of the advertisement read:

> Submissions are invited from persons and groups interested in recommending curriculum development projects of national significance for Technical and Further Education, which might be undertaken by TAFE authorities". (CPSG, 1983a, p. 11).

3.5 The establishment of the Curriculum Project Steering Group (CPSG)

In 1982 the ACTD established a national standing body called the Curriculum Projects Steering Group (CPSG) to provide advice to the directors on NCP. The first meeting of the CPSG took place on February 4, 1982, at the TAFE National Centre for Research and Development in Adelaide. The meeting suggested that the functions of this group be:

a) the development of policy options and advice to TAFE authorities concerning national curriculum projects;

b) the recommendation of priorities among curriculum projects to the Conference of TAFE Directors and the Board of the TAFE National Centre;

c) the facilitation of the development of curriculum projects;

d) the provision of advice to the TAFE National Centre for Research and Development on curriculum projects (CPSG, 1982b).

In August 1982, it was resolved that a TAFEC representative should be invited to attend for agenda items where TAFEC funding was being discussed (CPSG, 1982).

Although the CPSG had an initial role in providing advice to the Centre, this role has diminished as the Centre has reduced the amount of curriculum work it undertakes. Consequently the emphasis in the role of the CPSG has changed to advising to the ACTD on curriculum matters. Even so, the Centre continues to work closely with the CPSG the chairman of which is a member of the Research Committee of the Centre.

Currently membership of the CPSG consists of:

- the chairperson who is a member of the ACTD;
- a senior curriculum officer from each of the eight TAFE authorities;
- a nominee of the Executive Director of the TAFE National Centre for Research and Development;
- a senior curriculum officer who is a nominee of the National Working Party of Women's Advisors in TAFE;
- a nominee of Commonwealth/State Training Advisory Committee (COSTAC); and
- a nominee of the Commonwealth Department of Employment and Industrial Relations.

The diagram (Figure 3) shows the national structural relationships between the CPSG and other TAFE bodies and associated activities.

The CPSG meets on four occasions each year, usually February, June, September and November.

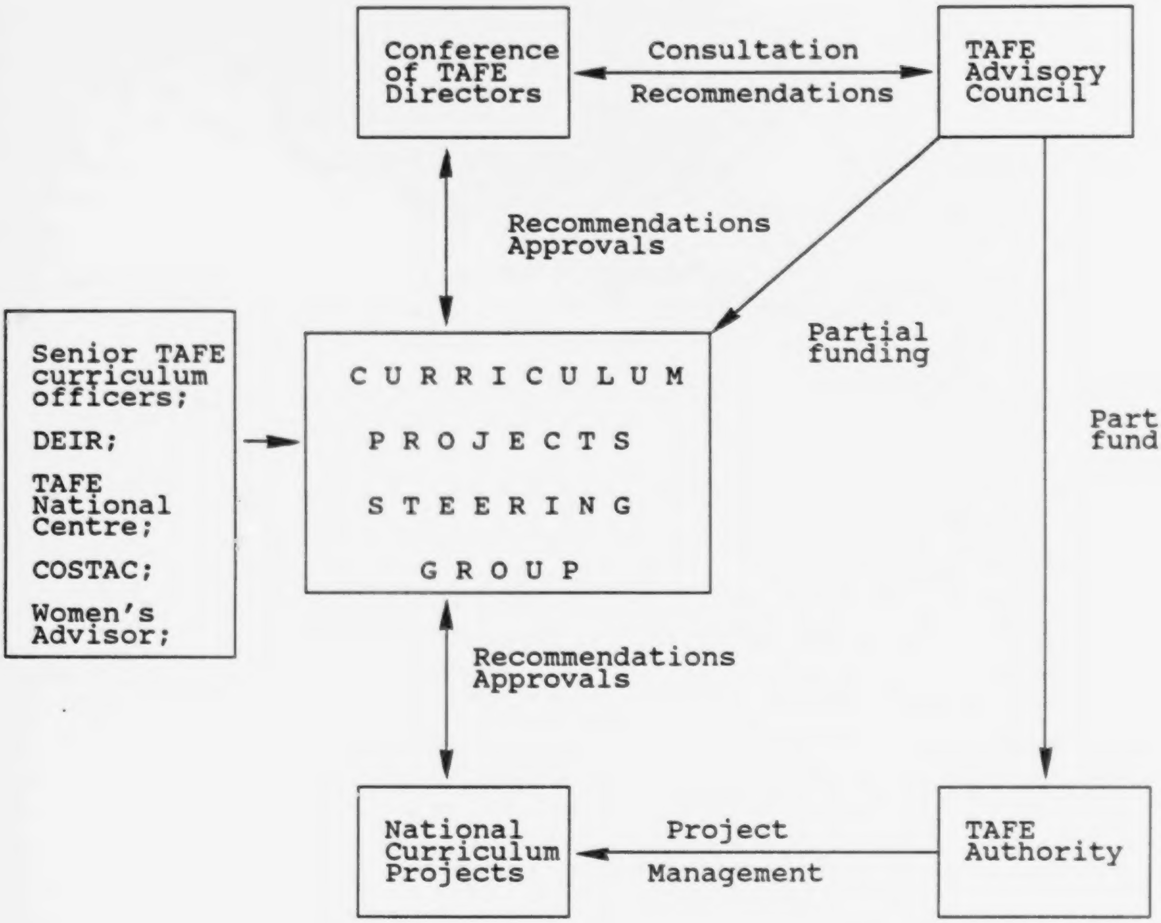
Conference of TAFE Directors
Consultation
Recommendations
TAFE Advisory Council
Recommendations Approvals
Partial funding
Senior TAFE curriculum officers;
DEIR;
TAFE National Centre;
COSTAC;
Women's Advisor;
CURRICULUM PROJECTS STEERING GROUP
Partial funding
Recommendations Approvals
National Curriculum Projects
Project
Management
TAFE Authority

FIGURE 3
NATIONAL STRUCTURAL RELATIONSHIPS BETWEEN THE CPSG AND OTHER TAFE BODIES

(after C. Sandery, National Curriculum Projects Manual, Figure 2.1 p5)

4. THE AIMS OF THE PROJECT AND THE ROLE OF THE CPSG

4.1 The range of alternative management approaches to NCC development

4.1.1 The task force approach

The CPSG has concerned itself with the approaches to the development of NCP in general and with NCC in particular. Part of the rationale for the development of the fitting and machining NCC in 1980 was to "... develop a procedure for the efficient development of national core curricula in Australian TAFE..." (Jones, 1983, p.36). This led to the development and common use of the task force model, although the CPSG had, by August 1982, come to the view that "... it could well be that a decision concerning which approach to (NCC) seemed appropriate should be made on a case by case basis (i.e. that a single approach was not appropriate)" (CPSG, 1982a, p.3).

Although reservations such as those above had been expressed, the task force approach to the development of NCC has emerged as the main methodological model of development, delivery and evaluation of NCC (Jones, 1983, p.36; Sandery, 1985a, p.11).

This model contains a number of procedures which are illustrated diagrammatically in Figure 4. It is a circular process beginning with the development of an NCC and re-beginning with the revision of the NCC as a result of the comments of industry on the performance of graduates.

Absolute commitment to any model can lead to a stereotyped approach. Although each step will appear for most NCC, the approach to each step will differ from case to case.

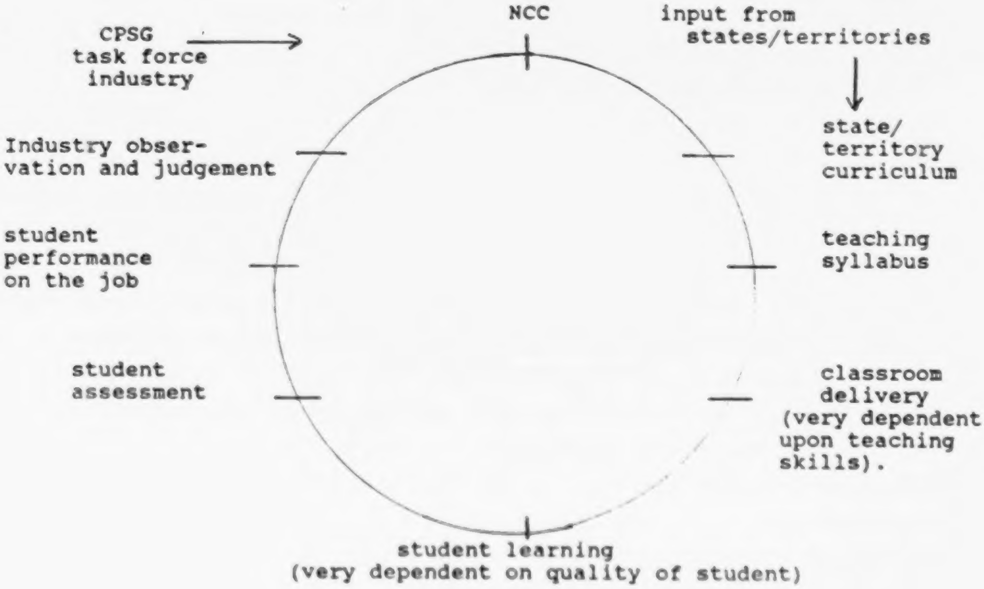
NCC
input from states/territories
CPSG task force industry
state/ territory curriculum
Industry observation and judgement
teaching syllabus
student performance on the job
student assessment
classroom delivery (very dependent upon teaching skills).
student learning (very dependent on quality of student)

FIGURE 4
A MODEL OF CURRICULA PROESSES FOR DEVELOPMENT, DELIVERY AND EVALUATION OF NCC.

a) The parameters for the task forces

At the February 1982 meeting, the CPSG proposed that it should set the parameters for task forces. Each task force would be answerable to the CPSG and it would be the responsibility of each to propose a curriculum development methodology for the project concerned.

The CPSG assumed responsibility for the membership of task forces (CPSG, 1982b) and for ensuring that they had adequate terms of reference including:

- a clear statement of what is expected of them;
- definition of terminology used in the guidelines, for example syllabus, curriculum, terminal objectives; and
- an expected timetable with specific date of completion.

It was also expected that industrial surveys/reviews be undertaken before syllabuses were finalised. (ACTD, 1981c).

b) Consolidation and refinement of the task force approach

Jones (1983) consolidated the task force approach to NCC development by recommending:

> ... That because of its particular suitability to the current Australian TAFE situation, the task force approach to NCC development and implementation, where each TAFE Authority is represented by one endorsed officer, be continued as a worthwhile approach... (p.30).

The task force approach to NCC development has continued to be the main method of NCC development up to the present time, despite a growing concern by the TAFE directors as to its effectiveness and cost benefit for TAFE authorities and the fact that during the same period, a number of co-operative ventures between TAFE authorities were proposed or proceeding in, for example, surveying, maritime, footwear, customs, cartography, navigation and hydrography. Some outcomes of cooperative projects are discussed in Section 4.1.4(a).

With the consolidation of the task force approach, activities in NCC development within the CPSG have been directed towards refinement of that approach. Some of the developments are discussed below.

(i) Industry liaison

The December 1982 meeting of the CPSG decided that liaison with industry at state and national levels was important for NCC and NCP to be effective and that such liaison may involve a two tiered approach (that is with management for major issues but also with those at other levels who are aware current work practices).

COSAC suggested that TAFE-industry liaison be reflected in all task forces (or their equivalents) for all vocationally based national curriculum projects with industrial/commercial representation being provided by a nominee of the Industrial/ Commercial Training Authority/Apprentice Authority from the convening State (CPSG, 1982). It is reported in the case studies that some employers have been concerned at what they see as the limited level of employer liaison.

(ii) Keeping courses current

Every effort should be made to keep nationally-based TAFE courses up to date (that is, there should be greater emphasis on the work of course advisory committees). (CPSG, 1982c).

(iii) The need for additional resources to be taken into account

CPSG (1982c) expressed concern that those involved with the planning, design and development phases of NCP (mainly NCC) may not fully take into account the additional physical and human resources which may be required for the implementation of the courses.

In order to meet that concern, the CPSG suggested one of two approaches to national curriculum development. Either the planners and developers should first determine the maximum resources available and then develop the program within the resource constraints or plan and develop the best curriculum and then attempt to modify the course at the implementation stage if the lack of resources dictates such action. (Subsequent discussion with college staff in several states indicated that the latter course had occurred with a number of the nationally developed courses). In any event the CPSG concluded that curricula should be developed so as to ensure that effective outcomes are obtained with optimum use of resources (CPSG, 1982c).

(iv) Importance of uniform documentation

The December 1982 meeting of the CPSG also discussed the importance of documentation when submitting national curriculum syllabus documents to the ACTD for approval. A need was seen for a specially designed pro forma to accompany the syllabus document.

Such a pro forma, in the opinion of the CPSG, should place emphasis on resources, including equipment, minor works, staffing as well as other aspects such as student assessment and methods of developing consultation with training authorities (CPSG 1982c). The relation between the method of documentation and degree of implementation is one of the themes of this study.

(c) Restating the parameters for task forces

At its September 1983 meeting the CPSG reconsidered what the most effective and efficient composition of a task force should be and subsequently set new criteria for membership:

- The convener. This person should be the CPSG representative or a nominee of the CPSG representative of the convening TAFE authority and should be an experienced curriculum officer.

- One representative from each TAFE authority (including the convening TAFE authority).

- For a trade area, one representative should be a nominee of COSAC, and the other a nominee of the appropriate national ITC; for a non-trade study area, industry representatives should be nominees of professional, accrediting or employee associations with a demonstrated educational or training interest. Both these representatives should be from the convening state/territory. As indicated above, the actual level of representation has been criticised in some industry circles.

- A representative of the TAFE National Centre. (Subsequently this policy has changed with the Centre only attending task force meetings if asked).

Task force meetings were to be held in the convening state/territory, but could be held elsewhere if funds were available from other sources, and/or if the reasons for meeting elsewhere were acceptable to the CPSG (CPSG, 1983,).

(d) Criticisms of the task force approach

It has been maintained that the task force approach has had mixed success. The problems have included ill-preparedness of task force members who either did not understand or worked outside of approved objectives, inability to accommodate the variety of different requirements of individual authorities on format, nomenclature and accreditation and inability of CPSG to achieve desired changes in directions pursued by task forces.

There has also been criticism that the involvement of each authority in each task force meeting has been an expensive way of developing a syllabus or other product. This may be true, but if there is to be acceptance and recognition of the product, each authority needs to feel part of and involved in each project and to believe that its idiosyncratic requirements have been sensitively treated. Perhaps, as each authority becomes better at understanding and accommodating the differences of other authorities, there will be a greater willingness of TAFE authorities to forego full involvement in a the activities of a task force. Recognition of differences must extend to differences in mechanisms of responsiveness, processes of curriculum development, approval/accreditation procedures, nature of documentation and patterns of course offerings.

Oversight of national projects places heavy demands on CPSG members and their staff in each authority in keeping task forces and others working on national projects on track, within budget, and responsive to the wishes of CPSG. Reports four times a year to CPSG, and presumably, concomitant briefings in the convening authorities, have appeared not to achieve the needed monitoring and management of projects.

4.1.2 The search for more economical approaches to national curriculum development

The optimum use of available funds has provided an ongoing issue for discussion at most CPSG meetings. Accepting that the task force approach to national curriculum development, however effective it may prove to be, was a costly exercise, the group was at all times looking for more economical approaches to national core curriculum development. In December 1983, papers were tabled on this issue. One of the papers in particular questioned the efficiency of practices concerned with conducting a NCC project.

The paper pointed to a dilemma. Commonwealth responsibility for TAFE curriculum in Australia is unacceptable because of the strongly held feelings of state autonomy. On the other hand, the practice of all TAFE authorities acting in isolation on curriculum development is potentially uneconomic. The resolution of the dilemma must be a rational balance between preserving the rights of states and a sensible use of resources.

This raises the question: how far should national curriculum projects go? For example, a national co-operative effort could be effected to produce an industrial/occupational task analysis or a competency profile in the relevant vocational area. Such an outcome could be used as a basis upon which the TAFE authorities could develop their own syllabuses in the area. An approach of this nature would lead to a nationally acceptable core of competencies and, at the same time, accommodate special state/territory educational and training needs. This approach could include the preparation of nationally or cooperatively developed learning materials such as texts and assessment methodologies. It would also enhance local ownership and use of nationally or cooperatively developed curriculum products.

In February 1984 the CPSG continued discussion on more economical approaches to the development of NCC (CPSG, 1984a). This discussion may be summarised as follows:

- there may be a need for 'tighter' guidelines for task force activities;
- NCC developed using the present methodology (task force developing a NCC syllabus) may not be a cost effective process of curriculum development; and
- the methodology that has been used to date needs critical appraisal.

As one member of the CPSG put it: there was a need to implement and evaluate new approaches to both the management and the supervision of projects.

4.1.3 The feasibility study - its necessity and its role.

One responsibility of the CPSG was to ensure that task forces had adequate terms of reference (Section 4.1.1.(a)), but concern was expressed that several projects had lacked clarity in the original specifications. This had caused difficulties for the project convener and task force members. One attempt to resolve this problem has been to conduct "feasibility studies", but these have created other problems, including:

- the expectation that the original project submission need only to indicate the desirability of some work being done in a study area, and that, on this basis, a feasibility study (at least) will be approved;
- the reality that these feasibility studies, as presently conducted, are extremely unlikely to come up with a decision not to proceed with a full project.

It has been maintained that, while the feasibility study seemed like a good way to go, to be effective as part of a program of national curriculum projects, it should occur before CPSG becomes involved. Such studies could be conducted, say, by cooperative efforts of interested TAFE authorities, with the outcome being the project proposal which goes to CPSG for funding approval. In this way the proposal which goes to CPSG could be sufficiently well specified to ensure a quick decision.

The proposition that the CPSG not be involved in the feasibility studies is not accepted in this study. The role feasibility studies should play in the development of NCC is discussed in Section 6.1.2.

4.1.4 Possible management approaches other than the task force

The CPSG has been very conscious of the high costs involved with the task force model approach to the management of NCC development and felt that other mechanisms need to be explored particularly as the task force method had become so entrenched in the development of NCC. In fact, in her manual on NCP, Sandery (1985a) devoted a whole section to describing the membership, roles and responsibilities of people involved in these task forces. Nevertheless there are other possible approaches to the management of NCC development.

(a) Co-operative project method

This describes the method used when, two or more, but not all TAFE authorities are directly involved in meeting project objectives. Following the initial submission of a concept proposal and its subsequent approval by the ACTD, a small working party would be set up in the convening state/territory. The working party would engage in a period of concentrated and comprehensive preparation which would include an interchange of information with curriculum liaison persons in all the relevant TAFE authorities by means of letters, papers and telephone contacts. The working party would present an initial report to the CPSG.

Following the initial report of the working party, the CPSG would establish a task force for the relevent study area and set down the terms of reference for the development of the co-operative curriculum. The task force would meet initially to discuss and formulate a management/development plan for the project, and while taking responsibility for the development of the curriculum, would set up small working parties in all relevant TAFE authorities to carry out the developmental work.

During the period of development, the task force would meet by teleconferences using loud speaker telephones and facsimile machines. Such teleconferences would be prefaced by a period of information exchange by letters, prepared papers, and normal telephoning by the task force members. The task force convener would report to the CPSG at periodic intervals on the progress of the project.

The second and final meeting of the task force would check the syllabus (in draft form) and make recommendations for its adoption and for the further development of associated products, such as nationally determined learning materials (or acceptance of existing materials), text development, assessment strategies, other maintenance of standards mechanisms and a NCC implementation monitoring strategy.

So far the success of cooperative projects has been mixed to say the least. Perhaps the best documented is that of surveying which was begun in 1982 as an interstate cooperative curriculum development project sponsored by the Australian Surveying Association (ASA). It was reported to the August 1982 meeting of the CPSG (1982a) that a working party of the ASA was preparing a prototype national syllabus index in surveying. The Northern Territory was to prepare a document concerning possible future developments. In October 1982, the ASA submitted a proposition for funding for refinement and implementation of the prototype national syllabus index together with the compilation of a resources compendium. The procedure was to be a continuation of the existing cooperative arrangements (Lagerlow, 1982).

At its October 1982 meeting, the CPSG (1982d) allocated $8 000 to the project and agreed that its management should change in that the participants in the working party should be representatives of TAFE authorities rather than the ASA. The project was originally to be convened by the New South Wales in 1983.

The working party met in August 1983 and requested $7 500 to:

- complete the development of an NCC program in surveying;
- complete an index of teaching resources for surveying in TAFE institutions in Australia;
- produce a national syllabus and resources index in surveying documents; and
- arrange for the acceptance of the NCC by industrial, professional and educational bodies (Lagerlow, 1983).

The working party reported the completion of the NCC in surveying to the September 1984 meeting of the CPSG (1984c). The document had been printed in August 1984 (TAFEC, 1984). Total funds expended were $16 000 (Appendix E).

The proposal for an NCC in maritime studies came from the Australian Maritime Studies Conference. The proposal which was costed at $20 000 per syllabus was to:

- develop national core syllabus documents for two Australian Certificates of Competency;
- develop and organise the interchange of teaching/learning resources; and
- develop and organise the interchange of assessment strategies.

It was proposed that the project be the responsibility of the Australian Maritime Studies Conference in association with the Australian Association of Ports and Marine Authorities (Flinders, 1985). The proposal was to be discussed with the ACTD. Since then there has been no progress.

A proposal for a cooperative curriculum project in cartography was prepared in September 1985 and submitted to the December meeting of the CPSG. The purpose of the project was to develop a curriculum which could be shared by participating institutions. The estimated cost was $21,000. (Clarke, 1984). The proposal which was supported by the Australian Institute of Cartographers was not accepted by the CPSG which deferred it for reconsideration in 1986. (CPSG, 1984d). There has been no subsequent action.

The CPSG appears to have been wary of approving cooperative projects mainly because of a concern that they lack central management. It will be noted that surveying was brought to a successful conclusion when the taskforce approach was introduced.

b) Delegation to a TAFE authority

This approach may be adopted when the expertise required to meet the project objectives is located in a specific TAFE authority. Mathers (1985) commented that national meetings would be required to discuss and endorse the methodology and to appraise the final products.

Using this methodology a single TAFE authority would take the full responsibility for the development of the NCC project after the concept had been approved. A NCC development group representing the curriculum branch, study area experts and non-TAFE stakeholders would be established and be responsible for the NCC development according to a set of specifications nationally determined.

The nationally determined NCC development specifications would be assembled during a period of information interchange between the relevant TAFE authorities and later refined by the CPSG, which would make the final determination. The convening state/territory CPSG member (or his/her nominee) would be a representative on the NCC development group and carry out an ongoing interchange with all other members of the CPSG. O'Connor (1987b), however, considered that this method of management might give the states/territories an insufficient stake in the project and hence reduce the chances of implementation.

c) Employing a consultant (project officer)

A single project officer (preferably from the convening state/territory) would be given the task of developing the relevant NCC according to a nationally-determined set of NCC development specifications. The general monitoring of the project would be carried out by a national advisory committee, which would meet twice only. At the first meeting the project concept and rationale, general development plan, project aims, objectives and methodology would be approved on the basis of a report prepared by the project officer from an interchange of information between that officer and the project advisory committee members.

The project advisory committee of three or four members would be appointed by the CPSG, which would have the main supervisory role and set the terms of reference for the project. The national advisory committee, in collaboration with the project officer, would report periodically to the CPSG.

The project officer would carry out all research associated with the development of the NCC in liaison with nominated persons in all relevant TAFE authorities. That officer would visit all relevant TAFE authorities for detailed information gathering and general observation of curriculum related matters. It is envisaged that the project officer would interview a range of TAFE and non TAFE stakeholders during the inter-state/territory visits.

The NCC advisory committee would meet to finalise the draft NCC syllabus and any other associated products with the purpose of making a recommendation that the CPSG endorse the NCC and associated products and recommend implementation to the ACTD. It was suggested that this approach would minimise developmental costs.

O'Connor (1987b) considered that this approach was a viable option. She emphasised that every state/territory, must feel that it had an adequate voice for, otherwise, no matter how good the final report may be, it would remain largely ignored.

4.1.5 A comparison of the approaches to the management of NCC development

These other approaches to management were seen by the CPSG (1984b) as, perhaps, being ways of reducing the high costs associated with the task force approach. Whichever approach was to be adopted, the CPSG thought it important that it be clearly specified early in the development of the project.

The opinions of task force members and of CPSG members on the effectiveness of these approaches relative to the traditional approach was sought in the case studies questionnaire. (Appendix C). Weatherhead (1987) considered that all options were generally less effective than the task force approach, but in specific circumstances, one of them might be preferred. For example, if a TAFE authority were able to provide a project officer of high competence and national standing in a discipline, then the project officer option might be preferable.

4.1.6 The techniques of curriculum development

All the above approaches were concerned with the management of the project rather than with the techniques adopted by the project managers. Whatever method of management is adopted, the managers may use a variety of techniques.

A discussion of the various techniques in TAFE curriculum research with a guide to their selection is provided by Anderson and Jones (1986). The CPSG considered that the work of Anderson and Jones would be helpful in selecting an appropriate technique (CPSG, 1984a) of which the following are examples.

a) Preliminary investigation

All curriculum development projects in TAFE should include some form of preliminary investigation. This will show the gaps in the current knowledge and so guide the direction of further investigation. For example, suitable curriculum materials or even a syllabus may be identified and this could lead to a validation rather than a development process. This is fundamentally the reductive approach described by Sandery (1985a) where common curriculum content across the nation is determined.

b) Exploratory research

This research is undertaken in order to determine what the broad thrust of a course offering should be in terms of scope, degree of emphasis to be given to segments of the program, depth of coverage within subjects and the more important aspects of subject sequencing. For vocational curricula, this often involves an occupational task analysis or what Williams and Hayton (1987) describe as a comprehensive occupational data analysis program (CODAP).

This method is sensitive to detecting change and the educational implications of change and so has the advantage of preventing the problem of preparing a course which is obsolete by the time it is implemented. It places a premium on the ability to synthesise and to extrapolate. The usual method of data collection is by interview and therefore skill is required in conducting relatively open and free-ranging interviews and analysing responses in order to determine main themes.

c) The Delphi technique

This is a method designed to obtain consensus from a group of experts about the likely pattern of future events and to show where these experts disagree. Consensus is obtained by sending a series of questionnaires to the experts and summarising and returning the responses until patterns of agreement and disagreement become clear.

This method is seen as a promising means of assessing the directions which experts (or, at the least, informed observers) believe an industry will take. It would work best in curriculum development for areas undergoing rapid change, where no one really knows the shape of things to come.

d) The DACUM method

This method is used to develop systematically a training program incorporating all aspects of the curriculum (syllabus, assessment, teaching resources) based upon the compilation of detailed task analysis from a panel of experts brought together in a structured workshop session managed by a skilled facilitator.

The DACUM method is said to be particularly suitable for researching occupational needs in established vocational areas such as in reviewing or revising existing TAFE programs.

e) Search conference method

This procedure aims to assist people to make effective decisions now by clarifying what educational programs should be delivered in the future taking account of likely trends and current constraints. The search conference workshop should be made up of representatives of the occupational groupings, teachers, students, curriculum developers, administrators and any other key decision makers in curriculum implementation.

f) Nominal group technique

The nominal group technique is used to:

- define a problem;
- generate solutions; and
- establish priorities for action.

The technique requires a small group of people who possess expert or up-to-date knowledge and/or who will be required to implement any decisions, to meet in a brainstorming session in order to establish consensus in priorities. The session is broadly limited to silent writing of ideas with discussion limited to clarification only. The final consensus is established by voting.

g) Force field analysis

In this method, strategies for implementing changes to a developed curriculum are generated by identifying the forces, both negative and positive, that are retarding change. The method is seen as means of providing direction in situations of complexity and resistance to change, for example, a planning group wishing to foster an educational innovation could use the method to analyse implementation difficulties in order to discover where pressure for change might be used to best effect. Although not a curriculum development technique in its own right, the method is useful when used in conjunction with procedures such as a search conference.

h) Critical incident technique

This method may be used to obtain a description of behaviours which are 'critical' to the success of a task. It is suitable for eliciting practical information about working with equipment, processes or people and for determining where emphasis should be placed on curriculum design and in assessment. Anderson and Jones (1986) commented that there were, at the time they wrote, no case study applications in TAFE of this method.

4.1.7 The techniques used in NCC

The techniques used in every one of the NCC projects undertaken so far have not been identified in this study. However, of those techniques which have been identified in the literature and the case studies, preliminary investigation was used for automotive mechanics, plumbing, sheet metal and electrical exploratory research involving an occupational task analysis was used for automotive and vehicle studies - new technology and carpentry and joinery and DACUM for real estate.

Some judgments on the extent of the use of the various techniques in developing an NCC might be made from the work of Williams and Hayton (1987) who investigated the types of occupational and training needs analysis methods currently employed in Australia. The most favoured methods were CODAP, DACUM and occupational task analysis. They reported that Delphi, critical incident and force field analysis were each used only once.

4.1.8 Curriculum development and ownership

Kennedy (1985) noted that occupational curriculum development was often located externally to the user. That is the curriculum is designed in a central location and disseminated for local use in what has been described as the research, development and diffusion model. Kennedy asked whether a curriculum can achieve its aims if the users are not involved (that is, have a sense of ownership) in its development. He conducted a case study of two specific curriculum projects in Western Australia and showed that, where users of the curriculum were involved in the decision-making processes, they were likely to be very concerned with the impact of the curriculum on the students. That is, a sense of ownership of the curriclum ensures a greater likelihood of concern for its impact than one imposed externally.

4.2 The extent of the implementation of NCC in all states/territories

It is one thing to prepare a NCC, it is quite another for it to be implemented. Yet if an NCC is not implemented, at least to some extent, in most states, there is very little point in preparing it.

4.2.1 The fidelity of users in conforming to the pre-specified goals of curriculum developers

Kennedy (1985) noted that implementation is the vital link in securing desired outcomes from specific educational programs. What happens during the implementation process will determine both the form that an educational program will take and the impact that it will have on students. There are no neat formulae which will ensure that the outcomes are congruent with the original intentions of the curriculum designer.

In the context of occupational curriculum development, there has been considerable emphasis on ensuring uniform outcomes so that, irrespective of who teaches the curriculum or where it is taught, all students will exit from a particular course with the same skills and understanding. That is, the user of the curriculum will exercise fidelity in its implementation.

Systematic models of curriculum design have been used to try to secure these ends on the assumption that it is possible to specify design characterstics in such a way that potential users will have to use the resulting program exactly as the designers have specified. One such model is the research, development and diffusion model referred to in Section 4.1.8.

It has often been assumed with this model that the efficacy of the design system will overcome any problems which are likely to arise once the program is in the hands of the user. This is a highly questionable assumption as it seems that the most which can be expected in using such a model is that the curriculum will be adopted by the intended users. A decision to adopt, however, cannot be equated with a decision to use and cannot be interpreted to mean that the adopted curriculum is in actual use. Curriculum developers have little control over their products once they are diffused into the user system.

Berman and McLaughlin (1978) found that involving the user in decision-making increased the fidelity of implementation. Even so, some kind of change to the original curriculum was almost inevitable because users sought to change the curriculum just as the curriculum itself sought to change the behaviour of the user.

4.2.2 The relation between the method of documentation and degree of implementation

As pointed out in section 4.2.1, regardless of the method of documentation, changes to the original curriculum are almost inevitable as it is delivered through the program of the separate TAFE authorities. For example, there are variations among states/territories in curriculum documentation, in course design and structure, in the mode of presentation of the program and in content sequencing. Other curriculum elements such as teaching methodologies, learning materials, assessment strategies, expected student competencies and other student management policies often reflect local input into the NCC and may affect the NCC content. Regardless of local influences affecting the NCC content, it is essential for the successful implementation of the NCC as formulated by the NCC designers, planners, developers and managers, that the NCC be accommodated in the relevant local programs of the TAFE authorities. In other words, the 'essentials' of the NCC content should be maintained whatever the local variations.

It is suggested that the form of curriculum documentation used affects the fidelity of implementation. In April 1987 the CPSG adopted a 'short form' which will allow flexibility in implementation while ensuring that the documentation was adequately prescriptive in parts of a discipline undergoing change (CPSG, 1985b). The documentation as adopted is shown in Appendix D (CPSG, 1987) and is flexible enough to expect the user to be able to implement the curriculum as documented with minimum amendment.

McBeath (1985) argued that, by producing their own learning materials from a syllabus document, TAFE authorities engage in wasteful repetitious effort, particularly if there is no fomal machinery for sharing these materials. She identified six task forces which had expressed an interest in extending their work to materials development and two which were seeking to reconvene to consider specifically national materials sharing and development. She argued that if the documentation work of the task forces were extended to include the development of educational materials, there would be less wasteful repetition of effort and the easier it would be for the user to maintain the essentials of the NCC content.

4.2.3 Accreditation procedures and implementation

Each state/territory has its own documentation and content requirements for accreditation of courses and the CPSG has little or no control over these requirements. Regardless of how an NCC is documented, the requirements of state accreditation will affect the means by which and extent to which that NCC is implemented in the state.

4.2.4 Monitoring of implementation

The extent of implementation, and therefore the usefulness of the NCC, can only be determined by some form of monitoring. In September 1983, the CPSG accepted that the implementation of the NCC syllabus was the responsibility of the relevant TAFE authorities and resolved that no TAFEC funds be allocated for an ongoing monitoring role. TAFEC funding should cease after the national core syllabus has been completed (CPSG, 1983). In other words, it was decided that there should be no national monitoring of implementation and there the matter lay until it was raised again a series of papers which were prepared in 1985 by senior curriculum officers of TAFE authorities.

It was noted in one paper that a large number of national curriculum projects had been conducted under the guidance of CPSG over the three previous years. There had, however, been very little done to evaluate the implementation of these projects. It therefore seemed to be an appropriate time to conduct a program of evaluation which would look at the extent to which a NCC has been implemented in all TAFE authorities, and the extent to which it had affected the programs in those authorities.

It was stated in another paper that, once a core curriculum had been endorsed, the implementation phase needed to be monitored. Hitherto it had been agreed that implementation was a state function, and although a monitoring process was in existence, its efficiency was very much in doubt.

According to this paper, there was no real knowledge of the process of implementation of core curriculum from state to state and the factors which made it easier to implement in one place rather than another. Furthermore there was little knowledge of the costs of implementation, there was no knowledge of the most effective methods of implementation, and there was no means of passing on the lessons learnt in implementation of one core curriculum project for the benefit of the next.

Yet, it was claimed, a curriculum project stood or fell on its implementation. It was put to the CPSG that it was failing in its duty to the ACTD if it did not exercise control over, and report on, the implementation processes being carried out by the states/territories. It was recommended that the CPSG should urge the TAFE directors to endorse the development of an evaluation process which could be applied to national core curriculum projects during their implementation phase.

The suggestions for monitoring of implementation put forward in these papers were not accepted by all members of the CPSG. This was a consequence of the strongly held opinion that the implementation of an NCC was the sole responsibility of individual TAFE authorities and that it would be inappropriate to consider any form of national supervision. Nevertheless, there was concern that national core syllabuses should be implemented by the TAFE authorities. In June 1985, it was agreed that more emphasis should be given to implementation matters. To this end, national core curricula task force conveners were directed to place stronger emphasis on syllabus implementation issues during the developmental stages of the national curriculum project. This implementation consideration should be followed up by providing a completed implementation pro forma with the presentation of a national core syllabus to the CPSG (CPSG, 1985a).

Traditionally, once an NCC syllabus document has been ratified by the CPSG and recommendation made to the ACTD for approval to implement, the NCC has been said to be in a monitoring phase. The relevant NCC task force convener is deemed to be responsible for overviewing and reporting the progress of implementation, as compared with that proposed in the implementation pro forma, back to the CPSG through the CPSG member of the convening state.

However, no firm CPSG policy exists on how this overviewing and reporting function should be effected and there is a view that it is impossible to effect. Nevertheless one strategy has been for the CPSG to authorise a further meeting of the relevent NCC task force within the first year of NCC national implementation and, on the basis of the information gathered at this meeting, for the task force convener to report back to the CPSG. This strategy has been funded only on an ad hoc basis. Another strategy is for individual CPSG members to give brief updates of the implementation progress in their states/ territories.

Where requests for NCC task forces to meet in the NCC implementation phase are not approved, the task of an NCC task force convener is made very difficult. Contact by telephone and/or letter have proved to have limited usefulness as a means by which a task force convener can gather accurate information from other task force members.

4.3 The impact NCC has had on the maintenance of standards between colleges and between authorities

In this study the word 'standards' has been given a very wide interpretation. It is taken to encompass not only the maintenance of relativity between courses in different colleges and authorities, but also the maintenance of relevance of courses to the changing needs of students in a society with rapidly developing technology.

The CPSG was warned that commonness of course content as a result of NCC development did not necessarily lead to consistency of standards of course outcomes. For example, there are difficulties in maintaining consistency of standards during translating the curriculum products expressed in a national core syllabus into an authority syllabus and finally into a teaching program at college level. Therefore if consistency of course standards is the main criterion for the existence of a national core curriculum, it may perhaps be better achieved by national or co-operative efforts, such as nationally determined (and accepted) lists of expected student competencies, sets of learning resources or assessment item (or project) banks.

4.3.1 Monitoring of standards

The determination of whether standards (however defined) are being maintained requires some degree of monitoring. Whether the CPSG should be involved in such monitoring and, if so, what its role should be, has been a matter of continuing discussion within the Group.

In September 1983, the CPSG expressed concern as to what role it should play in the maintenance of a NCC syllabus once it had been established and approved for implementation, and decided that it was responsible for any modification which should be made. It agreed that the convening TAFE authorities should monitor the standards of national core curriculum syllabuses and that they should consult with the other relevant TAFE authorities regarding the need for syllabus modification. Where appropriate, a report should be forwarded to the September meeting of the CPSG dealing with any of the following:

- proposed amendments to the NCC syllabus;
- the need for a major review;
- the need for a national meeting or any other activity; and
- the currency of the national syllabus document.

In addition, if there have been no major changes for five years after adoption, the TAFE authority responsible for monitoring should be required to justify why the course should continue to be accepted. Any costs involved should be borne by the convening/monitoring TAFE authority (CPSG,1983).

When an NCC syllabus is in what has been called the monitoring phase, that is, during the period following the ACTD approval to implement, the task force convener in the convening TAFE authority is deemed to be responsible for monitoring the relevance of the NCC syllabus content to the industrial training/technical education needs served by the study area. The procedures which are followed are:

- the convening TAFE authority (through the NCC task force convener) by liaison with the relevant learning institution in the state/territory and the industry concerned, effects changes to the local NCC based program;

- such changes update the NCC syllabus in the convening state/territory; and

- the convening TAFE authority (through the NCC task force convener) liaises with the other participating states/territories (through the NCC task force member for each authority) in respect to changes in content of their NCC based programs. The convener provides an analysis of these changes and submits them to all participating authorities for confirmation. Following confirmation of the update by all contributing authorities, the task force convener submits a formal draft report through the appropriate CPSG member to the CPSG for its information and action. Should the updating be more than a 'fine tuning', the convener may request the CPSG for funding to call all task force members to a meeting in the convening state/territory. Such a meeting may result in a recommendation for a major review.

It seems to be a CPSG policy to recommend that TAFEC funds be used for major reviews only. Minor updates (fine tuning) costs are usually borne by the TAFE authorities.

4.3.2 Accreditation and registration and maintenance of standards

The establishment in January 1985 of the Australian Council on Tertiary Awards (ACTA) might require that the CPSG take a more prominent role in the maintenance of standards of NCC. Part of the charter of ACTA requires it to promote consistency throughout Australia in the standards of courses leading to TAFE awards, to issue guidelines on the standards of courses for various awards, and to monitor adherence to these guidelines. Further, ACTA states that the AEC has agreed that, in carrying out its functions, ACTA should have the power to satisfy itself that the procedures used by authorised bodies in the assessment of courses are such as to merit national registration of the awards (ACTA, 1987). It is possible that, if the CPSG does not take that more prominent role in the maintenance of standards, then the role may be taken up by ACTA in the fulfilment of its charter.

4.4 The cost-effectiveness of developing and implementing core curricula

In Section 2.4 reference was made to a number of papers tabled at meetings of the CPSG. One of these papers discussed the possibilities of more economical approaches to NCC development. It was claimed that, in terms of resources used, the contribution of a convening TAFE authority to a national curriculum project, including the costs of translating the national core syllabus into the TAFE authority syllabus and program, was more than twice the cost that the TAFE authority would incur if it developed the study area independently. It was suggested that, in many ways, NCC are unsatisfactory halfway houses between state curriculum development and national/federal/commonwealth curriculum development.

The cost burden imposed on the states and territories in the development of NCC has caused the CPSG to be concerned with cost-effectiveness and efficiency in its approaches to national core curriculum development. This concern has led to limiting national co-operative efforts to what appeared to be the least costly and most effective of national curriculum products.

The approach of the CPSG may be summed up thus: a national project, the purpose of which is a NCC syllabus statement alone, may not be cost-effective. There are at least two other purposes for engaging in a national curriculum co-operative activity which would make it more cost-effective. These are:

- the development of a needs assessment resulting in a competency profile or a list of broad objectives which may be used as a basis for state curriculum development; or
- the development of teaching and learning materials which, many argue, are the really tangible benefits to TAFE teachers and students.

In May 1984 the CPSG emphasised that, while there was strong support both inside and outside TAFE for the concept of co-operative national curriculum development, there was still a need to rationalise the costs in terms of benefits to the TAFE authorities. (CPSG, 1984b).

The major concerns have remained unaltered. A national core syllabus document has remained the main outcome of a national curriculum project and this outcome is very costly in that it takes a long time to prepare and uses expensive resources.

Moreover, there were considerable additional costs to TAFE authorities during its implementation, especially if the TAFE authority syllabus required modification. Indeed, there could be further costs at the college level in terms of time, additional equipment and so on. For example, it has been reported that in the Northern Territory, the necessity to use full-size joinery items rather than models, has put the TAFE authority to considerable expense.

In September 1984 the ongoing concern of TAFE authorities on the costs of engaging in national curriculum activities was iscussed again and the CPSG agreed:

> ...that each TAFE authority should undertake a complete costing of a project it had convened. This should include its own costs, and costs to participating TAFE authorities, both direct and indirect. Costs should also be compared with a comparable authority funded activity... (CPSG, 1984c. p.24).

The ACTD, in November 1984 similarly expressed concern at the apparently high costs of conducting national curriculum projects and implementing the outcomes. It was claimed that a contribution of approximately $4 is made by TAFE authorities for every $1 contributed by CTEC. The ACTD suggested that the CPSG should indicate the cost implications of national curriculum projects, including capital cost and further, that the learning materials for one of the continuing projects should be developed co-operatively and that each participating TAFE authority evaluate the costs of its contribution.

Several papers were tabled at the December 1984 meeting by CPSG members on the costs exercise and were valuable in demonstrating some 'hidden costs' to TAFE authorities. Two of these costing exercises, namely those for sheetmetal and real estate, are discussed in the case studies. The CPSG, influenced by the discussion on costs of national curriculum projects, strengthened their view that there was a need to look at less costly curriculum development methodologies. (CPSG, 1984d).

One member of the CPSG commented that the costs of NCP compared with what were seen as little obvious and tangible benefits had been a primary concern to both the ACTD and the CPSG. Although there was strong general support both in and outside TAFE for national curriculum cooperation and development, TAFE authorities were conscious that NCP were:

- largely additional to their own state/territory curriculum development program;
- more obviously costly than their own programs; and
- apparently lacking in benefits to TAFE authorities.

It was considered debatable whether these concerns were justified and, even if they were, it was suggested that they were short-term when it may be more appropriate for TAFE authorities to take a longer term perspective. For example it would be expected that the high cost of the establishment of national cooperation would be offset by much lower subsequent costs. Using fitting and machining as an example, it was suggested that the update costs would be considerably lower than the establishment costs.

Overall the CPSG has recognised that, in respect to limited resources, it should maintain a constant watch on costs vis-a-vis the perceived benefits. In June 1985 it resolved to establish a working party the task of which included improving the guidelines for the preparation of proposals to ensure realistic costing of projects. (CPSG, 1985a). There is no evidence of this working party having met.

4.5 The benefits of NCC to students and teachers

Jones (1983) identified the major benefit of the NCC concept as its demonstrated capability of providing quality curriculum materials/resources. He also identified the very substantial staff development and personal development opportunities afforded the task force members. In particular they are able to promote the development of, and derive benefits from, an information network across all TAFE authorities.

In February 1984 the question of the extent to which NCC in their present form were of value in the classroom was raised and it was agreed that the question needed to be investigated (CPSG, 1984a).

Two principal benefits were identified at that time - development of quality curriculum materials/resources and staff development. Although the need has been recognised, beyond the above very little has been done to identify any benefits. One member of the CPSG considered that the time was appropriate to evaluate the extent to which TAFE lecturers and students who are working under a national core curriculum are supportive of NCC.

4.6 The opinions of bodies outside TAFE on NCC

These bodies include registration and licensing committees of the relevant regulatory authorities, the industrial training commissions, industrial training committees and non-statutory bodies such as employer associations, trade unions and professional associations.

The CPSG has worked on the assumption that there was strong support from these bodies for the concept of NCC for vocational education and training. That there is such support is illustrated in the following recommendations of the Kirby (1985) report.

> The Commonwealth Government, in conjunction with the states, should take steps to bring together work on:
>
> 1) the development of national common core curricula for trades;
> 2) the production of basic trade manuals;
> 3) the updating of trade curricula;
> 4) the development of competency standards for trades; and
> 5) the development of on-the-job training guides. (p.20).

With regard to this recommendation, COSTAC established a working party to address the issues raised (Newton, 1987). The CPSG agreed that as a matter of principle the development of on-the-job training statements should be co-ordinated with the development of common core curricula. Funding should be provided by both the CPSG and training review standing committees as appropriate.

> To improve the quality and relevance of instruction there should be much greater interchange between industry instructors and TAFE teachers, supported by the TAFE Council's grants to States (Kirby, 1985, p.20).

> The State training authorities and those responsible for the development of TAFE national common core curricula should co-operate in an examination of the prospects for crediting previous training and experience of mature-aged students in formal course training (Kirby, 1985, p.21).

COSTAC referred these two recommendations to the CPSG for the development of strategies for their implementation (CPSG, 1986a). The CPSG agreed that this was more appropriately a matter for the ACTD (CPSG, 1986f).

The TAFE National Centre has prepared a report on crediting the previous training and experience of mature-aged students in formal TAFE courses. It was presented to the April, 1987, meeting of the ACTD (Strachan and Thomson, 1987). The report recommended that the ACTD should set up a working party, possibly using the CPSG structure, with a brief to bring about changes which would tap the pool of talent in the work force which is unrecognised in any formal sense.

4.7 The role of the CPSG in the development and implementation of NCC

This theme has permeated much of what has been written already since, for example, no discussion of the range of approaches to NCC could be conducted without considering the role of the CPSG. In this section activities of the CPSG other than those considered above will be discussed.

4.7.1 The CPSG as the main official standing committee advising the ACTD on curriculum matters

In June 1985 it was confirmed that the ACTD had formally acknowledged the CPSG as the main official standing committee advising it on curriculum matters. (CPSG, 1985a). At the same time papers on the proposed role of the CPSG were considered.

It was suggested that the most appropriate role of the CPSG was as a policy advising body to the ACTD. It was claimed that it had experienced considerable 'anguish' when it had concerned itself with operational activities such as the management of projects and the implementation of results. It was recommended that the CPSG should:

- establish clear terms of reference to the effect that the CPSG is a policy advising body to the ACTD;

- establish a clear definition of sponsored projects and delegate management of those projects to nominated individuals; and

- receive project reports and respond by offering advice to the project manager or revising the project definition.

This view was supported by another suggestion that the CPSG should have a policy advice role rather than a project management role and it was considered crucial to its future that the policy advice role be recognised and acted on.

In order to advise the ACTD on national curriculum matters, it was proposed that there were three specific tasks for the CPSG:

- the recommendation of policies concerning national curriculum projects to the ACTD;

- the selection of curriculum projects for approval by the ACTD; and

- the monitoring of approved projects in order to advise the ACTD on them.

It was recognised that in order for the CPSG to fulfil its role as a policy-recommending group, there would be a need for much wider discussion of policy matters within the CPSG than previously and that this wider discussion would require CPSG members to be well informed on the curriculum policies of other TAFE authorities.

For example, if the CPSG is to provide advice on the way in which NCP are to be funded in the future, it will be necessary to know what proportion of TAFE authority funds should be earmarked to NCP as opposed to authority curriculum projects. The argument was summed up by one writer thus:

> The danger is that if we do not provide advice on these wide ranging matters to the Directors, they will obtain their curriculum advice from less well informed sources, or make ad hoc decisions without any advice at all.

It was suggested that once the major nettle of the CPSG as a policy development group was grasped, a great many other things would fall into place, including the specific national curriculum policies with which the CPSG should be concerned. It was recommended that the CPSG should:

- limit the number of projects, but look at them in terms of the complete curriculum package (including materials where appropriate), thus implying increasing the funding of individual projects;

- develop recommendations for the ACTD on matters related to, but not directly part of, national curriculum programs (such as the provision of opportunities for professional development of TAFE authority curriculum staff, or the enhancement of opportunities for more effective state level curriculum development programs); and

- develop processes for cooperative curriculum development funding involving several states, but not national level funding.

If policies such as these were to be accepted, there will be implications for the future development both of CPSG and the national curriculum program as a whole, which will need to be examined and costed. In particular, the implications of increased funding going to a smaller number of national projects, thereby depriving other projects, which may serve substantial and sometimes vocal constituencies, will need to be considered.

As a result of the considerations discussed above, the CPSG has identified and agreed upon seven roles for itself:

- the formulation of (broader) policy advice on curriculum issues to the Conference of TAFE Directors;
- the discussion of national curriculum issues;

(In discussing the above two roles, it was recognised by the CPSG that in the past the Group had concentrated its efforts on the identification, initiation and monitoring of national curriculum projects. Now, it was agreed, that the CPSG should exist to provide the ACTD with co-ordinated advice and a national or overall perspective on curriculum issues).

- the provision of advice to the ACTD on the identification of NCP;
- the initiation of NCP:
- the monitoring of NCP within established guidelines;
- the facilitation of the co-operation and co-ordination of curriculum development among TAFE authorities; and

(Senior TAFE curriculum representatives now meet regularly. The consequent exchange of information is a means of reducing unnecessary duplication of effort in cooperative activities).

- the provision of advice to the ACTD on curriculum projects initiated by the TAFE National Centre for Research and Development.

(This was claimed to be one of the original roles of the CPSG. Although at no stage inviting the Centre to comment, the CPSG saw the provision of advice to the ACTD on the selection of Centre curriculum projects as desirable (CPSG, 1985a). This issue is discussed in Section 6.8.2).

In September 1985, the CPSG was informed that the ACTD had agreed to the first five of the roles which it had identified. It was decided to seek clarification of the view of the ACTD on the other two proposed roles. (CPSG, 1985b). There is no record that any clarification has been made and so it may be assumed that the role of the CPSG as determined by the ACTD in 1985 (that is, the first five of the above roles) is that which applies currently.

4.7.2 Criteria for selection of projects

In 1982 the CPSG documented its ideas on the selection criteria for NCC. They were:

a) number of states to be involved;
b) occupational mobility;
c) number of students to be affected;
d) legislation/licensing changes across states;
e) technological changes or developments;
f) balance across streams and fields of study;
g) demands for skills by students;
h) benefits in terms of improved course development and implementation and teaching materials quality;
i) . total cost of project
   . costs/benefits of project
j) justified industry pressure;
k) new initiative in one TAFE authority of potential utility to other TAFE authorities;
l) emphasis on syllabus projects;
m) update and maintenance of existing national core curricula. (CPSG, 1982a).

Since 1982 with the acquisition of more experience through their co-ordinating role in the development of NCC, the CPSG has continued to refine its course selection criteria.

Jones (1983) ranked in order the selection criteria he identified and noted that the kinds of selection factors sought after by different groups of stake holders are quite different and may even be contradictory. Those he identified were that:

a) TAFE authorities formally acknowledge that their curriculum for the study area concerned is in need of review and/or improvement, in terms of relevance of content, and/or range or quality of curriculum development products available (including teaching and learning resources);

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b) senior TAFE study area officers and curriculum personnel acknowledge that their curriculum is in need of review and/or improvement;

c) TAFE teachers and industry/commerce spokespersons acknowledge that the local curriculum is in need of review and/or improvement;

d) that new or revised external studies materials (e.g. textbooks, study guides) are needed for the study area;

e) at least one TAFE authority, but preferably more than one, is prepared to undertake the preparation of a detailed submission documenting reasons for the initiation of NCC development, in accordance with the selection criteria established by the Conference of TAFE Directors (and/or its Curriculum Projects Steering Group);

f) at least one TAFE authority, which acknowledges that its curriculum for the study area involved is in need of review, desires to act as the convening TAFE authority;

g) the Conference of TAFE Directors (and/or its Curriculum Projects Steering Group) formally endorses the need for a NCC activity in the nominated study area;

h) TAFE authorities formally commit themselves to an involvement in the NCC activity, at least to the extent of committing sufficient resources to permit one representative to participate fully in the development process;

i) TAFE and industry personnel generally acknowledge that there is substantial occupational commonness across state/ territory boundaries,

j) one TAFE authority and/or the TAFE National Centre for Research and Development provide expertise in curriculum development (including curriculum materials development) which can be utilised to facilitate the NCC activity;

k) the occupational area is one for which TAFE graduates require qualifications which are portable interstate (such as those TAFE qualifications required to secure a licence to practise one's occupation);

l) the study area is characterised by fairly small student (or potential student) numbers;

m) the occupational area is one in which it is generally acknowledged occupational practices have undergone substantial recent modifications due to changes in technological, societal, or economic conditions; and

n) the study area is characterised by large student (or potential student) numbers. (p.8).

In June 1983, the CPSG, when considering national curricula activities for 1984 established a new set of selection criteria for setting priorities. They were:

a) the type of project (i.e. should the project selected reflect the range of TAFE activities);
b) availability of funds from other sources;
c) degree of TAFE authority support for the project;
d) the degree of support from outside TAFE;
e) present level of activity or funding in the area;
f) whether the project is a research or curriculum project;
g) need for portability of qualifications; and
h) economies achieved (for example in the development of learning materials). (CPSG, 1983c).

The CPSG also made the point that the above priority selection criteria should be considered with those established by Jones (1983).

In September 1983, it was decided that the number of NCC projects in any one year should be approximately ten to fifteen (CPSG, 1983), but that this decision would be reviewed from time to time.

Such limitations on the number of projects led to the need for selection from those suggested by TAFE and training authorities, industry bodies and the CPSG itself. In June 1984 a further set of criteria for the selection of projects was agreed:

. a national approach is important for the industry and the clients TAFE serves; and/or

. a national approach will lead to a better quality of curriculum product; and/or

. a national approach will lead to a substantial saving in the cost of developing a curriculum product;

. all TAFE authorities agree on the project as a priority project;

- the vocational area is a developing one, with a consequent need for TAFE to respond rapidly on a national basis; and

- the study is economically and/or socially important for Australia. (CPSG, 1984b,).

In 1985 one member of the CPSG commented that since its inception, the CPSG had come a long way in its selection of projects. Initially, the process resembled a grab for money. It seemed that authorities were proposing projects so that curriculum development which they had intended to undertake themselves could be funded nationally. By the time of writing, authorities were proposing projects for their national relevance and were cautious in agreeing to national projects the outcomes of which might not justify the total cost or where the costing was vague. In fact the member recommended that no project which could be successfully (or more cheaply) undertaken at the local or statewide levels should be selected for a national project.

At the same time, another member noted that the overriding criterion for the selection of an NCP was that all authorities agreed that the matter was of sufficient importance to warrant one and were prepared to allocate resources to it. He claimed that the reasons why an authority might agree were not terribly relevant to the CPSG and the criteria for agreement might differ markedly between authorities. The selection of projects at the national level was seen as being simply the collective expression of the perceptions of authorities regarding the importance of projects. The importance of observing state rights in the selection process can be seen.

The usefulness of the criteria for selecting projects agreed in June 1984 and the difficulties in applying them were questioned also. No matter how clear the selection criteria were, there would always be projects which did not quite fit. It was suggested that the criteria should be seen as guidelines with the emphasis being placed on those projects perceived by TAFE authorities as having a high priority. A further criterion was also suggested that a project which was so large that it could not be conducted by any one TAFE authority could be adopted as an NCP.

The criteria for selection of projects was raised again in June, 1986, when it was suggested that the CPSG consider an approach to the selection of NCP which would identify national training priorities from a variety of sources including the manufacturing sector, military and export areas and possibly traineeships. It was decided to prepare a paper on priority areas and mechanisms

for project identification (CPSG, 1986f). This paper was presented to the December 1986 meeting of the CPSG where it was decided that the approach of identifying important national priority areas and encouraging TAFE authorities to develop project proposals relating to these areas be researched further (CPSG, 1986b). Consequently it was decided at the October 1987 meeting that ACTD be advised that the CPSG would be seeking to direct its work to be consistent in the selection of projects with the national priorities enunciated from time to time by the Federal Minister, and that the current criteria against which CPSG assesses proposals be retained and applied in conjunction with the above statement (CPSG, 1987d).

4.7.3 On-going evaluation by the CPSG

There are at least two issues - evaluation of the implementation and standards of NCC and evaluation of the role of the CPSG.

a) Evaluation of the implementation and standards of NCC.

In September 1983 attention was called to some of the conclusions of Jones (1983) including:

- a need for evaluation, review and ongoing monitoring of NCC to ensure continuing improvement and relevance;
- scant attention to implementation difficulties during either the implementation or planning phases of NCC activities;
- an absence of planned monitoring or ongoing review activities by NCC representatives in their own state/territory;
- the need for an evaluation/review of NCC syllabuses and additional curriculum products within two to three years after their adoption by TAFE authorities;
- the need at the outset of the curriculum design process to provide for both ongoing and summative evaluations;
- the need to ensure the effective development and implementation of NCC products by ongoing monitoring/review and evaluation of NCC by the CPSG according to well-publicised guidelines; and

- serious inhibition of the capacity of the CPSG to monitor NCC activities successfully by a too rapid proliferation of new NCC undertakings.

It was commented that there was an immediate need to devise methods to maintain both long-established and more recent NCC and that this required synchronised TAFE authority review programs. This was not taken up by the CPSG. (CPSG, 1983a).

In September 1984, it was noted that a large number of curriculum projects had been conducted under the guidance of the CPSG in the three preceding years and that very little had been done to evaluate these projects. It was proposed that a program of evaluation which would look at several aspects be conducted. These aspects would include:

- the extent to which an NCC has been implemented in all TAFE authorities, and the extent to which it has affected the programs in those authorities;

- the extent to which TAFE lecturers who are teaching to a national core curriculum, students in the area, and the industry which is involved, are supportive of the NCC as it is being implemented;

- the extent to which there are differences between industry expectations of what is going on in a NCC classroom, and what is actually happening; and

- the efficiency and effectiveness (in terms of costs as well as other factors) of the methodologies employed in national projects.

Indeed it was suggested that it could well be valuable to devote the majority of the 1986 national curriculum projects resources to evaluations. This suggestion was not taken up by the CPSG

b) Evaluation of the role of the CPSG

In March 1985, in keeping with a policy of ongoing self-evaluation, the CPSG agreed to continue to monitor policies and procedures and to produce a consolidated statement which would in part outline its purpose. The broad policy areas to be considered were:

- the functions of the CPSG and how they should be carried out;

- the mechanisms, procedures and formats which should be used;

- the topics which those procedures should consider; and

- the future direction of the national curriculum program.

The particular issues to be considered in the consolidated statement were:

- selection of projects with regard to the long term planning for study areas and the number of projects to be attempted;

- management, including project initiation, curriculum development methodologies, project objectives and project end points;

- project evaluation;

- monitoring;

- synchronisation of TAFE authority curriculum development with national curriculum projects;

- learning materials development;

- implementation of CPSG policy; and

- the relationship of the CPSG with the TAFE National Centre for Research and Development (CPSG 1985b).

The concerns for self-evaluation were paralleled by discussions on whether there was a need for evaluation which involved bodies outside the CPSG.

In June 1985 the CPSG considered a proposal prepared by the TAFE National Centre for Research and Development for an independent evaluation. The proposal was not endorsed as it was considered to be untimely in view of the ongoing formative self evaluation of the Group. The CPSG considered that any independent evaluation should not be carried out until the Group had put the outcomes of its own evaluation into operation. Further, any future evaluation should focus on the quality of advice given to the ACTD and the effectiveness of the role of the CPSG in facilitating NCP (CPSG, 1985a).

4.7.4 Maintenance of TAFE/industry liaison

In December 1982, the Chairman of the South Australian Industrial Training Commission joined the CPSG. This was a recognition of the need for consultation between TAFE authorities and industrial training authorities in developing and reviewing vocational courses (CPSG, 1982c).

5. INTERVIEWING THE MEMBERS OF THE CPSG

In all, ten interviews covering senior TAFE administrators in curriculum in all states/territories all of whom were members of the CPSG were conducted. In the analyses of the interviews discussed below, particular respondents are identified by letter (e.g. 'A'). In this way it can be seen if any one respondent had consistently differing views from the rest.

5.1 General questions

The first nine questions sought general information on the knowledge CPSG members had of NCP and of their benefits and suitability.

5.1.1 Knowledge of NCP

To the question of the extent of their knowledge of NCP, in general, the members of the CPSG considered that they had a broad overview at the macro-level. The least knowledge reported (F) was knowledge limited to the minutes and the discussion of issues at CPSG meetings. By contrast another respondent (C) reported a very comprehensive knowledge resulting from a long association with the CPSG.

5.1.2 Value of NCP

There was a wide diversity of views within the CPSG on whether NCP are worthwhile. At one extreme there were those who were completely convinced of their value for reasons such as:

- providing a national forum for cross-fertilisation of ideas;
- meeting the needs for commonness of content;
- providing opportunities for mobility; and
- enhancing maintenance of standards.

In the middle ground were those who supported NCP in principle, but had reservations or, what amounted to the same thing, were ambivalent.

Reservations included:

- a view that the number of NCP should be reduced by applying more stringent criteria; and
- doubts whether the benefits justified the costs.

At the other extreme was the view of one respondent (G) that NCP generally were not worthwhile, although that respondent did concede that curriculum products such as shared learning materials did have potential.

Overall, the views of the members of the CPSG were that cooperative NCP were worthwhile but that they would be improved considerably with some modifications. Recommendations on the nature of these modifications is a principal purpose of this study.

5.1.3 Main benefits to TAFE authorities of implementation of NCP

If the NCP process is seen as worthwhile, the benefits of implementation should also be seen as substantial.

Because the process was generally seen as worthwhile, a large number of benefits was identified. Most of these benefits were related to the process itself rather than with implementation. For example:

- access to a large pool of experience, skill and knowledge and a consequent cross-fertilisation of ideas;

- a better use of available resources, and so a lessening of costs to the TAFE authorities; and

- the professional development of those participating.

Nevertheless benefits were seen in the implementation of NCC. These included:

- the development of a curriculum product with national acceptance and relevance to national industrial and commercial needs;

- the maintenance of standards together with portability of qualifications.

Two respondents (G and J) considered that there were no real benefits to the TAFE authorities in the implementation of NCP. One of these, (J), distinguished between process of development and process of implementation. No benefit was seen in implementation but the process was seen as a commonsense approach to curriculum development.

5.1.4 Relative importance of the development of NCC in NCP

It was pointed out to respondents that the NCC projects are only one aspect of national curriculum activity. They were asked the proportion of this activity they considered should be devoted to NCC.

Few respondents attempted to provide a quantitative answer to this question, but while agreeing that the proportion of national curriculum activity which should be devoted to NCC was difficult to quantify, it was agreed that, in general, development of a national core curriculum was an essential part of the process. Most respondents saw the NCC as the starting point for the development of related curriculum products by the individual TAFE authorities. Two respondents (B and J) considered that an occupational analysis should be an integral part of the development of an NCC.

5.2 The range of management approaches to NCC development

5.2.1 The task force approach

a) Views on the suitability of the task force approach to the design, planning and development of NCC.

Generally, respondents considered that the task force approach was appropriate and effective and that, while it had benefits, it also had disadvantages.

The task force approach was perceived as enhancing ownership and providing invaluable networking. However, it also considered to be over-expensive especially with regard to the amount of interstate travel involved. Two respondents (B and I) considered that there was merit in a single TAFE authority being delegated to produce an NCC.

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b) Quality of curriculum developed by task force approach

There was no general agreement that the task force approach to the development of NCC produces higher quality curriculum products and processes than the earlier state development methods. Two respondents (C and I) considered that it did; two more (B and E) that it had the potential to be better and the rest did not. One (K) considered that a single project officer may be better.

Of the two respondents who did consider that the task force approach was better than earlier approaches, neither considered the costs (of the order of $100 000 per project) too high. In addition, one respondent who considered that the task force approach had the potential to develop higher quality curriculum than previous methods (E) suggested that the cost issue was over emphasised.

c) Techniques used in developing NCC

The stakeholders were not questioned on the techniques which might be used to develop NCC.

5.2.2 Summary of opinions on approaches to management of NCP

Overall the members of the CPSG saw the task force approach to the management of NCC as appropriate and effective but, they believed that, although it had potential, it did not necessarily produce a higher quality curriculum product than state methods. The challenge posed was to find an approach which is superior to those used so far. The project officer approach was one suggestion.

5.3 The extent of implementation of NCC in all states/ territories

5.3.1 Number of NCC implemented by TAFE authorities

The total list of NCP undertaken as at 1987 (97 in all) and the degree of funding are shown in Appendix E. Of these, 24 are shown as completed. Generally respondents have indicated that all those relevant to their authority have been implemented. In numbers, the highest was 20 (B), the lowest three (F).

5.3.2 The fidelity of users in conforming to the pre-specified goals of the curriculum developers.

In section 4.2.1, it was pointed out that maximum fidelity in the implementation of a course is enhanced by involving the user in the decision-making process and thus promoting a sense of ownership of the curriculum. This was confirmed in the interviews where the major stakeholders saw a sense of ownership among teachers as being very important in promoting implementation.

a) Changes in quality of NCC due to modifications by TAFE authorities in implementation;

Virtually all TAFE authorities modify NCC as they are implemented in their colleges, but those which commented on the effects of modification on quality did not think that it was affected.

b) Degree of implementation of elements of NCC in relevant college courses;

Virtually all members of the CPSG responded that their TAFE authorities had implemented the principal elements of the NCC in their college courses entirely, or to a very high extent. On the other hand, one respondent (G) indicated that, in his TAFE authority, the NCC had had little effect on local courses, and another (E) that they had made little impact on courses for which training authorities were responsible.

Generally respondents considered that the degree of fidelity in inplementation by users was high. This result would not be unexpected as most of the respondents were closely involved in the curriculum procedures if not in actually preparing the syllabuses. Further, as pointed out in section 4.2.2, the CPSG had developed a system of documentation which has enhanced fidelity of implementation.

5.3.3 Degree to which NCC should cover the needs of the programs of TAFE authorities

No respondent indicated that the NCC should meet completely the needs of the TAFE authority. It was expected that there would always be some local content; one respondent estimated as high as 30% of the total.

Respondents were asked their opinions on the degree to which NCC content should be included in the authority syllabus to warrant the cost of developing the NCC. Those respondents who were prepared to give an opinion placed the proportion of NCC content at over 50%, with the exception of one (E) who said that 40% would be worthwhile. O'Connor (1987) questioned these opinions. She asked why, if the various authorities had agreed that particular content should be part of a common core, all of the authorities did not incorporate all of the common core material in their syllabuses. If an NCC syllabus has to be modified to a large extent, she wondered whether the original feasibility study had been thorough enough.

Since it would appear that generally more than 70% of NCC content appears in any authority syllabus, the degree of implementation of NCC in TAFE authority syllabuses warranta the cost of developing the NCC. Whether the syllabus is actually followed is taken up in the next section.

5.3.4 Relation between documentation and degree of implementation

Respondents were asked to what degree they thought the type of NCC syllabus documentation affected the implementation of NCC by TAFE authorities and what form of documentation best enhanced implementation.

Opinions were divided. Some considered that a more comprehensive documentation in behavioural terms (long form) was necessary for effective implementation, while others considered this to be unduly prescriptive and that minimal documentation with, say, only terminal objectives (short form) allowed for professional interpretation. Still others considered that the type of documentation had little effect on implementation.

In effect, most respondents agreed that there was a connection between the nature of documentation and the degree of implementation, but there was an extreme of views on the nature of that connection. It was noted in Section 4.2.2 that a statement of minimum curriculum documentation was adopted by the CPSG in April 1987.

5.3.5 Monitoring of implementation of NCC

Respondents were asked if they thought that the monitoring of the implementation of NCC should be the concern of a TAFE national group and, if not, should there be formal authority monitoring mechanisms.

Opinions on national monitoring of implementation were divided, although most supported the concept. Those who did considered that such monitoring was necessary for planning and maintaining the TAFE image as a national provider, but recognised that there were difficulties in a perceived abrogation of state rights. This latter view was echoed by those who said no because monitoring was a state responsibility. For example, respondent B commented that state monitoring was an essential part of the education process.

Those who were opposed to national monitoring of the implementation of NCC courses were unanimously opposed to formal monitoring mechanisms being set up by TAFE authorities. The general comment was that existing mechanisms were sufficient and so, by inference, such mechanisms are not formal. Those who favoured monitoring favoured no particular mechanism, but did agree that any monitoring should be conducted in a co-operative, advisory and consultative manner.

5.3.6 Role of the CPSG and its individual members in the implementation of NCC

Respondents were asked whether the CPSG, as such, should take an active role in the implementation of NCC; if not, whether there is an implementation role for CPSG members in their own TAFE authority, and, if so, how they would see this role effected.

Generally, members of the CPSG were opposed to the CPSG taking an active role in the implementation of NCC. Implementation was seen entirely as an authority concern. However most considered that individual CPSG members should play a role in the implementation of NCC syllabuses in their own authorities, generally in liaison with colleges and task force members.

5.3.7 Constraints on TAFE authorities on implementation of NCC

Respondents were asked to comment on the effect that the following constraints may have on the implementation of NCC.

a) Availability of capital equipment

This was seen as a problem which should also be considered at an early stage of curriculum development.

b) Updating of teaching expertise

This was seen as part of the strategy for implementation and should be addressed in the documentation.

c) Variations in legislation among the states/territories

This was seen to be a problem which should be considered at the early stages of the project. The effects of this problem is considered in the case study on real estate.

d) Satisfaction with the status quo

This was seen to be a problem which can be overcome by effective leadership in the colleges.

5.3.8 Summary of opinions on implementation of NCC

It must be recognised that the decision whether or not to implement an NCC in any state or territory is a matter for that state or territory alone. TAFE authorities decide to implement those NCC which are relevant to their own programs and, although they are usually modified to suit their own needs, they generally use all the elements of the NCC which they implement. Overall it is considered that the degree of implementation warrants the cost of developing the NCC.

Opinions were divided on the monitoring of the implementation of NCC. Some were in favour of a national group being established to monitor such implementation while others considered that was a matter completely for the individual TAFE authorities. These latter respondents generally were opposed to formal monitoring within the individual systems.

If a national monitoring system of implementation were established, there would be opposition to this being a responsibility of CPSG members. They were seen having a role in their own authorities in liaison with colleges and task force members.

Implementation would be enhanced if constraints, such as the need for capital equipment, could be overcome early in the development process and if the sense of ownership of the curriculum among teachers could be increased.

5.4 The effect of NCC on the maintenance of standards between colleges and between authorities

5.4.1 The effect of NCC on the quality of curriculum products compared with locally developed courses

Most respondents considered that, in general, the NCC product was of higher quality than locally developed courses. There was some opinion that the product was no better but, perhaps fortunately, no opinion that it was worse. One respondent (F) considered that, although the NCC product was not superior to the local one, the purpose of NCC was not to produce a better product. He did not volunteer his opinion of the purposes of NCC.

a) The relevance of NCC to existing industrial situations
It was generally agreed that NCC were relevant to industry.

b) The impact of NCC on the quality of learning materials

Of those respondents who were prepared to express an opinion, the impact of NCC on the quality of learning materials was considered to be positive. The principal advantage was seen to be the availability of a wider range of learning materials.

c) The impact of NCC on the teaching/learning methodologies in the effective delivery of programs

Many respondents had no opinion on this question, suggesting that any impact had hardly been spectacular. This was confirmed by those who considered there had been a positive impact - they considered it to be less than that on the quality of learning materials. It might well be argued however that as NCC are concerned with core material, they should not have an effect on the teaching/learning methodologies adopted in the classroom.

5.4.2 Effect of classroom modifications on the quality of NCC

It was generally agreed that modifications in implementing an NCC in the classroom did not adversely affect its quality. One respondent (B) asked why they should. She saw the quality being enhanced as both national and local needs would be covered. Respondent F agreed with those views.

There were two further elements in this topic.

a) The availability of material and people to implement all NCC based courses fully

With some exceptions, for example printing, all TAFE authorities generally have the material and people to implement NCC-based courses in at least some colleges. By implication, some centralisation of offerings may be necessary for NCC-based courses.

Proposals for some centralisation of TAFE courses are not new. In October 1982 the TAFE Board of Victoria submitted to the CPSG a discussion paper suggesting that the conduct of programs in the high technology courses could utilise the best available staff and the most modern equipment, syllabuses and facilities through specialist multi-state TAFE training centres. The Board suggested that TAFE programs for the aircraft/aerospace, textile and printing industries might be conducted in such centres (Cutter, 1982). With regard to training on high technology and 'super' high technology in the printing industry, Hayton (1987) has proposed the establishment of a national printing college available to students anywhere in Australia.

b) Effect of lack of resources on form and character and standards of some NCC products

This will only apply where resources are not available and so, in most TAFE authorities, it will apply to those few colleges which provide the NCC-based course without the resources to implement the courses fully. The general opinion was that changes do occur, but that the intent is maintained and so the changes do not have an adverse effect on standards.

5.4.3 Monitoring of standards

Respondents were asked their opinions on whether the monitoring of standards of NCC-based courses in all relevant TAFE authorities should be a matter for a national TAFE group.

As with the monitoring of implementation (section 5.3.5), the respondents were divided. Those who considered national monitoring desirable said that it was essential for planning and would have the support of employers. Those who considered it undesirable saw monitoring as a state responsibility. There was virtually no support for a TAFE national monitoring group. O'Connor (1987) probably reflected the view of many CPSG members when she expressed grave doubts about casting the CPSG in the role of a policeman. If an evaluation of any NCC course was required, she maintained that it should be done by a task force with a completely new membership and with no axe to grind.

5.4.4 Development of assessment item banks

Assessment item banks have been developed in a number of NCC and those which have been developed have been seen as very helpful in maintaining standards. The need for constant updating was noted. Generally respondents would include student projects and assignments as assessment items in the banks.

However not everybody favoured assessment item banks. Respondent B considered that the value of large item banks was overrated. Greater value was seen in sharing successful items through the teacher networks established by the task forces. Respondent F saw such item banks as incompatible with state/territory accreditation requirements.

5.4.5 The use of national industry/occupational surveys in maintaining standards

It is generally accepted that all TAFE vocational courses, including NCC, should match the expectations of employers of graduate competencies and that the standards implied in these expectations should be sustained. Respondents were asked if they considered standards of knowledge and skill would be maintained if all NCP were preceded by national industry/occupational surveys.

The general view was that such surveys were, if not essential, very useful. One reservation (J) was expressed about expense with the suggestion that perhaps a single state/industry occupational survey would suffice.

One respondent (F) was opposed to national industry/occupational surveys but did not explain his opposition.

5.4.6 Summary of opinions on the maintenance of standards

Generally it was considered that NCC were of higher standard than locally developed curriculum products and the the most positive effect of NCC on standards was the improvement in the quality of learning materials. No TAFE authority considered that the standards of NCC were adversely affected by lack of material and human resources for effective implementation although a degree of centralisation (even national centralisation) may be required. It was almost unanimously accepted that national industry/occupational surveys would help maintenance of standards.

Opinion on whether there should be national monitoring of standards of NCC was divided.

5.5 The cost-effectiveness of developing and implementing core curricula

5.5.1 The visible and hidden costs of NCC development

There are certain costs which can be directly attributed to NCC development, for example salaries, travel and accommodation costs of officers directly concerned, and costs for items such as printing, syllabus documentation and contracting.

In addition, beside the obvious additional costs of buildings, equipment and in-service training, there are hidden costs which many respondents thought would be high, even outweighing visible costs. However, they were seen as difficult to quantify. Among the hidden expenses identified were:

- administration costs;
- opportunity costs, for example the costs involved in a NCC project distorting local TAFE authority curriculum priorities;

- the cost of setting up a teacher information network in each authority to facilitate NCC implementation; and
- the cost of translating the NCC to a form suitable for presentation to state/territory accreditation authorities.

Although these hidden costs were considered to be high, some considered that such costs would be offset by not only the visible benefits but by hidden benefits such as the development of informal networks.

Part of the cost of developing NCC is met by CTEC through its designated grants. Most respondents had no idea of the contribution of CTEC grants to the total cost. The only quantitative estimate was made by respondent C who suggested that CTEC met about one-fifth of the total costs of developing an NCC.

Estimates of the actual costs of two NCCs are given in the case studies B and C.

5.5.2 Comparison of costs of national and TAFE authority curriculum activities

It was generally considered that local TAFE authority curriculum activities were cheaper than national curriculum activities, the particular saving being in travel costs. The more expensive activity would be justified on the grounds of quality, but some questioned whether the quality of national product was in fact better than that of the authority product.

Similarly opinion was divided as to whether the development and implementation of NCC had resulted in any savings to TAFE authorities. However Weatherhead (1987) made the point that NCC were very important to the Northern Territory which often does not have the resources to produce an acceptable curriculum product. NCC gives them the opportunity to meet their needs while saving a lot of money.

5.5.3 Distortion of TAFE authority priorities by NCC

It does not necessarily follow that the priorities for curriculum development in TAFE authorities will be congruent with national priorities as expressed by the CPSG. In fact, one of the principal opportunity costs identified (Section 5.5.1) was the cost of the distortion of local TAFE authority curriculum priorities by NCC.

All respondents but two (I and K), considered NCC projects had distorted TAFE authority curriculum development priorities.

5.5.4 Dependence on CTEC funding

Opinion was divided on whether TAFE authorities would continue to participate in NCP if CTEC designated grants were discontinued. Only one respondent (E) indicated categorically that his TAFE authority would continue to participate, while two other (G and H) considered that the absence of CTEC funds would have little effect. Two respondents (C and I) considered that their TAFE authorities would not participate in NCC production if CTEC funding ceased, while two others (B and D) considered that the participation of their authorities would be reduced.

5.5.5 The justification for capital expenditure in the implementation of NCC

The implementation of NCC often involves the provision of additional capital facilities. Respondents were asked if the benefits of NCC warranted the capital expenditure involved.

The respondents almost unanimously agreed that the answer to this question would depend upon the study area. In other words the respondents considered the expense was warranted sometimes and others that it was not. That is, there is no agreement that the implementation of NCC warrants additional capital expendiure.

5.5.6 The justification of costs based on the degree of common content in TAFE authority syllabuses

Respondents were asked how much common content there should be in existing TAFE authority courses before the development of an NCC would be worth the costs involved.

Most considered that a large degree of common content (up to as much as 80%) was necessary before developing an NCC was worth the costs involved. However there was an opinion (C) that emphasis on common content tended to sustain the status quo.

5.5.7 National training centres

It was pointed out to respondents that many large national companies have had to establish their own training centres to train their technical personnel to cope with change in technology so that highly trained staff are available regardless of location. They were asked whether the development of NCC would reduce the pressure on national companies to establish private training centres and whether such NCC would serve the national interest despite the costs.

Opinions on this matter were divided. Some considered that TAFE had a responsibility to fund general needs and that companies should pay for their own special training needs. Others thought that the need for such special programs may be reduced if more NCC were available. On balance it was not seen as a role of TAFE to develop NCC to provide the specialised training needs of national companies.

The concept of national training centres set up by industry was extended to nationally important TAFE vocational courses where the demand in any one state/territory does not justify the provision of facilities. The concept was generally supported. Of the four who did not support the concept, two (C and I) disagreed in principle, one (D) conceded it as an option in some cases (for example, printing) and one (F) did not know.

5.5.8 Cost-benefit of joint ventures in curriculum development

Respondents were asked if the development of curricula as joint ventures between TAFE authorities and private enterprise would be a cost-effective strategy. Most supported the concept of the user paying for the service, but one (G) doubted whether TAFE authorities could rely on the on-going support of private enterprise.

5.5.9 Summary of opinions on cost-effectiveness

Developing NCC was seen to be more expensive than TAFE authority curriculum activities although actual costs were seen as difficult to quantify. In any case, costs had to be balanced against benefits. However it was difficult to obtain a clear statement on the benefits respondents saw in NCC. They were, for example, divided on whether the NCC product was any better than those of the individual authorities, and on whether the development and implementation of NCC had resulted in any savings. In addition it was generally considered that NCC projects had distorted TAFE authority curriculum development priorities.

Although it could hardly be said that there was any confidence that the development and implementation of NCC were cost-effective, most would continue them even if CTEC funds were withdrawn. They saw real possibilities in funding such projects through private enterprise.

5.6 The benefits to students and teachers of NCC

5.6.1 Effectiveness in achieving course aims and objectives

a) Suitability of terminal competencies to current industrial tasks

This question was asked in the context of comparison between NCC and TAFE authority courses. Some respondents considered that NCC courses develop better terminal competencies, others considered that local curriculum development may be at least as good or better, while still others had no opinion.

b) Graduate mobility

Most considered that graduate mobility was an important issue in the development of NCC. This was particularly so where licensing (e.g. plumbing) was required. However, views varied widely between TAFE authorities. For example, in New South Wales, the probability of students wishing to transfer is so small as not to justify a national approach, while in the Northern Territory graduate mobility is important.

5.6.2 Benefits to TAFE teachers of NCC

The almost unanimous answer to this was the value of NCC for staff development. These benefits included exchange of ideas, better ownership of curriculum and the development of a wider understanding of curriculum implementation.

5.6.3 Use of NCC structures and materials as a model for TAFE authority courses

Opinion was divided on this question. Some considered that NCC provided a sound foundation for any curriculum development while others saw it as only one of a number of approaches to curriculum development and that others would be as effective.

Respondents were further asked if they considered whether, as a consequence of the development of NCC, TAFE authority curriculum managers had a better tool for planning, designing and developing curricula. Most did not consider this to be so. One respondent (E) saw NCC development merely as the merging of a fairly uniform set of procedures.

5.6.4 Benefits to students of additional facilities available as a consequence and development of NCC

a) Development of curriculum materials/resources

i) Nationally accepted student texts

Those respondents who expressed an opinion considered that the development of nationally accepted student texts had been valuable in producing better quality texts than those available previously.

ii) Nationally accepted student self-paced learning schemes

It was noted that NCC syllabuses do not include these and that they would be very costly to implement. However they were seen as potentially valuable.

iii) Nationally applicable self-evaluation procedures

Computer assisted self-assessment was given to respondents as an example of a self-evaluation procedure which might be developed. Respondents were not very enthusiastic about the idea, mainly on the grounds of doubts about the benefits warranting the costs.

iv) Nationally endorsed student projects and work assignments

There was no indication that such materials had been prepared for any NCC, but it was generally agreed that it would be desirable for such material to be prepared.

b) Responsiveness to technological change

There was very mixed reaction to the question of whether NCC-based programs were more responsive to technological change than TAFE authority programs. The majority of respondents considered that the TAFE authority programs were at least as responsive to technological change as NCC-based programs.

c) Student mobility

Generally it was agreed that NCC-based vocational courses improved the opportunities for mobility of current students, but it was also considered that it was graduates rather than current students who were interested in mobility.

d) Nationally accepted modules of core integrated learning with video support

There was no suggestion that such materials are available currently but some respondents thought they would be useful.

5.6.5 Benefits of informal teacher networks arising from staff involvement in the development and/or implementation of NCC

Most respondents considered that the development of informal networks was one of the most important outcomes of NCC, but the reservation that such informal networking might conflict with or distort the formal networks was expressed.

5.6.6 Summary of opinions on benefits to students and teachers

The principal benefits to students of NCC were identified as improved mobility for both graduates and students and the availability of better quality texts.

The principal benefits to staff of NCC was that NCC aided staff development through the exchange of ideas, better sense of ownership of curriculum and the development of a wider understanding of curriculum implementation. This was seen as often occurring through informal teacher networks.

5.7 The opinions of bodies outside TAFE on NCC

5.7.1 Views of licensing and professional bodies on the effects of NCC on acceptance of vocational qualifications.

Most respondents considered that NCC have made state/territory vocational courses more acceptable across Australia to licensing and registration authorities.

5.7.2 Industry understanding of influence of NCC on state programs and perception of benefits

Generally the respondents to the interviews considered that industry was aware of the influence NCC were having on state programs and that it perceived positive benefits from that influence. It was agreed that this varied from industry to industry and perhaps may be limited to those industries such as banking and plumbing which have been involved in the development of NCC.

5.7.3 Expectations of industry on implementation of NCC

The bland use of the word 'industry' has its dangers. The fact is that there is no such thing as the industry in any particular skill, but a diversity of establishments. There are major differences between small and large employers and between states/territories. Furthermore a paper prepared for the Victorian TAFE Board (Making changes, probably 1986, nd,) pointed out that industry-based education tends to be too narrow. In particular, the future needs of society may not match those of current employers. The discussion of the expectations of industry on the implementation of NCC is written taking account of these reservations.

On the whole respondents to the questionnaire considered that industry expects NCC to be implemented in full. It was also generally agreed that there is a higher level of expectation of benefits from the NCC among those industries where tradespeople must be registered and licensed. The most important benefits expected were more effective student terminal competencies, more awareness of national standards, a graduate with better potential to adjust to technological change, and the receipt of uniform qualifications leading to improved graduate and student mobility.

5.7.4 Summary of judgments on opinions of bodies outside TAFE

It was generally agreed that bodies outside TAFE were aware of the influence of NCC on TAFE authority programs and that most perceived positive benefits in this influence. For example, where an NCC had been implemented, there was a greater acceptance of state/territory vocational courses by licensing and registration authorities across Australia. Industry expected NCC to be implemented in full, particularly where licensing and registration were involved.

5.8 The role of the CPSG in the development and implementation of NCC

5.8.1 The current role of the CPSG

The current role was seen primarily to be the provision of advice to the ACTD on curriculum matters.

5.8.2 The future role of the CPSG

Respondents were asked if the role of the CPSG should be evolving or fixed and, if the former, how the role should change over time.

Most respondents considered that the role of the CPSG should change to meet changing situations. While to an extent this change will be in step with the priorities of the ACTD, it should also change to make the CPSG an initiating body rather than one which merely reacts to the ACTD.

This latter comment was in the context that many think that, up to the present time, the CPSG has played a rather reactive role in that it has received NCP proposals for consideration. The question was raised as to whether the CPSG should identify national curriculum priorities which relate to national issues and advise the ACTD accordingly.

5.8.3 The range of involvement of CPSG in national curriculum activities

This question was directed towards determining whether respondents considered the CPSG should be involved from the planning phase of an NCP to the implementation and monitoring phases. There was difference of opinion about the implementation and monitoring phases. Some considered these to be TAFE authority functions, other considered that the CPSG should be involved. Monitoring in particular, was seen by some to be a very sensitive issue into which the CPSG should not intrude.

5.8.4 Criteria for selection of projects

The existing selection criteria (section 4.7.2) were generally seen to be acceptable. There were some non-specific statements that the criteria might be tightened.

There was a further question as to whether the degree of commonness in the courses among the TAFE authorities should be a selection criterion. Generally it was agreed that this should be so. However warning was sounded that this should not become a sole criterion.

5.8.5 The need for a CPSG policy statement

Apart from the list of NCC selection criteria referred to above, there is no policy statement on the development of NCC by the CPSG. Respondents were asked if there should be one and, if so, should that policy dictate the selection criteria.

Generally it was agreed that the CPSG should develop a policy statement and that this policy statement should guide (not dictate) selection criteria.

5.8.6 The benefits to TAFE authorities of the involvement of CPSG in selection and development of NCC

The majority of the respondents considered that the involvement of CPSG in the selection and development of NCC had led to a very positive improvement in the quality of NCC. This was seen as being due to a wide and high level of collective curriculum experience.

5.8.7 The number of curriculum activities generated by the CPSG

It was pointed out to respondents that since 1981-82, the CPSG had involved itself in a large number of national curriculum activities. It was generally considered that perhaps it may now be the time to select fewer projects and to widen the policy advice role.

One respondent to the questionnaire for the automotive mechanics case study commented that, in his opinion, the CPSG had taken on too many projects. He feared that quality may suffer due to the sheer number of extra projects each year, in addition to those needing updating on a regular basis.

5.8.8 Liaison with Department of Employment and Industrial Relations (DEIR)

Respondents were asked if they considered whether the CPSG and DEIR should liaise in order to develop trade manuals which could become nationally accepted supplementary learning materials for TAFE vocational courses. They almost unanimously agreed that this should happen. In the words of one, it is absurd for the DEIR to produce trade manuals and for TAFE to set syllabuses.

5.8.9 Responsibility of CPSG to respond directly to the expressed technical education/training needs of industry and commerce

The respondents all said that it should not. The CPSG was responsible to the ACTD and all approaches by industry and commerce should go to the relevant TAFE authority for reference to the ACTD.

5.8.10 The use of an industrial/occupational surveys

Interviewees were asked whether they considered that the CPSG should insist on state/territory industrial/occupational surveys as a starting point in the identification of training needs, before applying the other selection criteria to NCP.

The majority considered that an occupational analysis should be part of all NCC development. However some thought there would be cases (one example quoted was occupational safety) where such a survey would simply not be applicable.

5.8.11 Concern for the training needs of national companies

The question was asked whether the CPSG had consciously taken in to account the training needs of national companies, and, if not, should these needs be a criteria for the selection of NCP.

The general opinion was that if TAFE considered the training needs of individuals and the general needs of industry, the specific needs of national companies would be considered in the process.

5.8.12 Summary of opinions on the roles of the CPSG

The role of the CPSG was seen as providing advice to ACTD on curriculum matters, but that this role would change according to the priorities of the ACTD. However the role should become less reactive than it is at present.

It was considered that the role of the CPSG should include involvement in the planning and development phases of NCP. Some also considered the involvement should also include the implementation and monitoring phases. The planning phase should include an occupational analysis where appropriate. The present selection criteria were generally accepted, with the additional condition that the degree of common content across the courses among TAFE authorities be taken into account. It was considered to be time to select fewer projects.

As a consequence of the wide and high level of collective curriculum experience available, the involvement of the CPSG in the selection and development of TAFE courses was seen to have led to a very positive improvement in the quality of NCC.

CPSG and DEIR should liaise in order to produce trade manuals as supplementary learning materials for TAFE vocational courses.

Among activities not considered to be among the roles of the CPSG, it was agreed that it should not receive direct approaches from industry on education or training needs, but that any approaches should be directed through the relevant TAFE authority. It was also agreed that the CPSG should not consider the specific training needs of national companies, but that these needs would be met effectively by considering the training needs of individuals and the general needs of industry.

5.9 Interviews with members of the CPSG - some conclusions

An analysis of the responses to the interviews revealed that members of the CPSG shared much common ground. There were a number of issues on which they were generally agreed and in nearly every case their agreement was positive. The issues on which they were agreed and which were seen as reflecting generally positive views were as follows:

a) the task force approach to the management of the development of NCC is appropriate and effective;

b) the degree of implementation of NCC warrants the cost of their development;

c) the implementation of NCC would be enhanced by considering constraints, such as the need for capital equipment, early in the development process;

d) NCC are of higher standard than locally developed curriculum products;

e) the most positive effect of NCC on standards should be the improvement in the quality of learning materials;

f) although the standards of NCC are not adversely affected by lack of material and people for effective implementation, a degree of centralisation (even national centralisation) may be required in some cases;

g) national industry/occupational surveys would help maintain standards of NCC;

h) NCC projects should be continued even if TAFEC funding is withdrawn;

i) there are real possibilities of obtaining funding for NCC projects through private enterprise;

j) the principal potential benefits to students of NCC are:

   - improved mobility for both graduates and students;
   - a greater acceptance of state/territory vocational courses by licensing and registration authorities across Australia; and
   - better quality texts;

k) the principal benefit to staff of NCC is better professional development through:

   - the exchange of ideas;

  - better ownership of the curriculum; and

  - the development of a wider understanding of the curriculum process;

l) industry is aware of the influence of NCC on TAFE authority programs and sees positive effects in this influence;

m) industry expects NCC to be implemented in full, particularly where licensing and registration are involved;

n) the roles of the CPSG are to:

  - provide advice to the ACTD on curriculum matters; and

  - be involved in the selection and the planning and development phases of NCC; and

o) the involvement of the CPSG in the selection and development of NCC has led to a very considerable improvement in their quality.

There were only three issues on which the stakeholders agreed and on which they held negative views. They were as follows:

a) if national monitoring of NCC is established, this monitoring should not be the responsibility of the CPSG;

b) NCC projects distort the priorities of TAFE authority curriculum development projects; and

c) CPSG should not address the specific training needs of national companies.

There were also three issues on which the stakeholders were divided. These were:

a) the national monitoring of the implementation of NCC is desirable;

b) the national monitoring of the standards of NCC is desirable; and

c) the development and implementation of NCC results in cost savings to the states/territories.

It can be seen that there was a high degree of unanimity among the members of the CPSG in their opinions of NCC and that most of these opinions are supportive of the process. The important matter of disagreement was that of monitoring.

6. DISCUSSION AND RECOMMENDATIONS

6.1 The range of management approaches to NCC development

6.1.1 Is there a preferred management approach to NCC development?

A number of approaches to the management of the development of NCC were examined in Section 4.1.4, but none of these approaches either determined or were determined by the techniques which were adopted by the managers. The techniques which might be used are discussed in Section 4.1.6.

The senior curriculum managers who were interviewed generally agreed that the task force approach to management was appropriate and effective, but, that the approach did not necessarily produce higher quality curriculum products than methods used to develop curricula in the various state authorities (which themselves may have been task force designed). The general opinion was that, if other management methods were to be used, the challenge was to find one superior to the task force method. One suggestion was the project officer approach. No views were expressed on which techniques might be used by the managers.

In the case studies there was no unanimous enthusiasm among the respondents for any option to the established task force approach. If another approach must be used, most would opt for the project officer approach.

There is no preferred method of management or techniques for the development of NCC and no recommendation is made on either. Rather these are considered to be matters which should be made on a case by case basis (section 4.1.1) and determined in the feasibility study. However some comment can be made on the general approach which has been adopted. The techniques used have tended to be those which apply best to established vocations with fairly homogeneous workforces (section 4.1.7). The possibility of using more search-oriented methods should be considered in the feasibility study.

It is RECOMMENDED that techniques of curriculum development such as:

- a combination of the Delphi and DACUM processes;

- the search conference method; and

- nominal group technique

be considered for use in the preparation of NCC particularly in those vocations which are undergoing change.

6.1.2 The feasibility study - its necessity and its role

The concern with the lack of clarity of original project specifications (section 4.1.3) has led to the proposition that before any project is formally adopted, there should be a feasibility study to determine whether it should proceed. This point is emphasised. The purpose of a feasibility study should not, as it can be, be a justification for proceeding with a project after that decision has been made but an analysis of whether the project should proceed.

It is RECOMMENDED that, before the CPSG authorises an NCP to proceed, a feasibility study be conducted to determine whether the conduct of that NCP is justified.

If the NCP is justified, the feasibility study should specify:

- the aims of the project;

- the approach (methods of management and techniques) to be used in the development;

- the duration of the project (lead times); and

- an estimate of the total resources required (including the cost of monitoring).

This recommendation has been developed from the work of Sandery (1985a) who saw the purpose of a feasibility study as determining whether a project is justified and, if so, then developing a detailed proposal describing:

- what needs to be done;

- how it will be done (the management method);

- when it will be done; and

- what resources will be required for the project.

a) The aims of the project

In the case studies, the aims of the task forces and the extent to which these were achieved were discussed. In the automotive mechanics and sheetmetal projects, of the aims adopted by the task forces, less than half were completely achieved. A principal reason for this was that the aims grew with the projects rather than being specifically defined by the CPSG. Eventually the projects had gone on for so long that they were simply terminated. One suggestion for overcoming this problem is to set terminal objectives for NCC projects and, when these objectives are reached, to terminate them.

It is RECOMMENDED that the aims of any NCP as proposed in the feasibility study and as accepted by the CPSG be not varied without the agreement of the CPSG.

b) The approach to be used for NCC development (the techniques and management)

There could be different development techniques and management methods for achieving each aim. These are outlined in Sections 4.1.4. and 4.1.6.

Sandery (1985a) commented that the sequence of steps to achieve each aim should be outlined in the feasibility study and the appropriate approach recommended.

It is RECOMMENDED that the approaches to be used to achieve the aims be specified in the feasibility study. When accepted by the CPSG, these approaches be varied only with its agreement.

c) Lead times

Among the principal subjects of debate at CPSG meetings has been the time taken to prepare national curriculum products for the approval of the ACTD and the point at which NCC projects should be terminated. A paper presented to the March, 1985, meeting of the CPSG (1985d) pointed out that the committee had never clearly defined when a project ceases to be a CPSG project. This was seen as a matter of some concern, as a number of people become very much involved with the projects. Failure to indicate a termination point may give rise to unreal expectations of continuing development.

In the states the actual lead times between beginning a project and accreditation has varied widely. The best result reported in New South Wales had been for the Certificate in Integrated Manufacturing where the lead time was six months but this was said to be atypical for that state. Such is not the situation in Queensland where it has been reported that the lead time is one to two months for a revised course and three to 18 months for a new course with the time getting shorter. At the other extreme, a lead time of up to four years was reported in Victoria.

The working party established by COSTAC to consider the recommendations of the Kirby report (COSTAC, 1987) noted that the average time for core curriculum development is around two years from proposal to implementation. The working party took the view that it would be desirable if core curriculum development could proceed more rapidly and suggested that the process may be expedited if documentation were simplified. As noted in section 4.2.2, the CPSG at its April 1987 meeting considered the question of simpler documentation and has adopted a statement of minimum curriculum documentation (Appendix D).

At its April 1987 meeting, the ACTD sought from the CPSG an options paper on methods of conducting core curricula work within particular time frames. It also discussed the practice of adding curricular material without deleting other elements (ACTD, 1987).

The difficulties which can arise when a project expands its aims as it proceeds, were shown in both the automotive mechanics and sheetmetal case studies. The automotive mechanics NCP was originally approved in 1981 with a requirement to complete its task in one year; the project was finally terminated in November 1985 with less than half the aims completed. The sheetmetal project was approved in 1981 with a similar completion requirement; funding was discontinued in December 1983 with only one of an eventual 19 aims clearly achieved. In both cases it could be argued that the task force members had developed unreal expectations.

The expansion of aims and lengthening lead times are complementary problems and need to be considered together. No increase in time should be allowed without the approval of the CPSG on the basis of reasons acceptable to the CPSG.

It is RECOMMENDED that the lead times of an NCP, as approved by the CPSG, be not varied without the agreement of the CPSG.

d) Total resources required

Resources must be considered for two phases of a project. Firstly there are the resources required to develop the NCC and secondly there are resources required to implement it.

With regard to development costs, as pointed out in section 5.5.1, there are direct costs as well as hidden or indirect costs. As can be seen from the detailed costings prepared in the sheetmetal and real estate case studies, these costs are often much higher than indicated in the proposals which go to the CPSG. This is because the attempts at costings put forward in proposals have been concerned only with direct costs and not with what might be termed opportunity costs and, with the additional costs implied in implementation.

With regard to implementation costs, Power (1987) commented that only in a few national curriculum projects has the resource feasibility of the recommendations been considered. Some NCC reports. have been adopted without due regard to the fact that in many states/territories the proposals were impossible to implement without substantial additional resources. This has been confirmed in the case studies, where lack of major equipment and capital resources were identified as major constraints on implementation.

The necessity for a complete costing of a NCP in the feasibility study is emphasised by the concerns expressed by the ACTD that a contribution of approximately $4 is made by TAFE authorities for every $1 contributed by TAFEC and that it may even be as much as $10 (section 8.4.4(a)). When projects are submitted to the ACTD for approval, the cost implications should be clear. (CPSG, 1984d).

It is RECOMMENDED that the feasibility study take into account direct, indirect and opportunity costs and the implied costs of implementation and monitoring when determining the total resources required for an NCP. Such costs would include:

- the cost of conducting an industrial training needs analysis;

- opportunity costs such as those involved in taking staff from other projects which may have a higher priority in a TAFE authority. In short, costs due to distortion of priorities. (section 5.5.3);

- capital costs of implementing a new, and probably technologically updated course;
- the cost of developing suitable materials;
- the cost of setting up a teacher network within the TAFE authority to facilitate implementation;
- the cost of major equipment, such as special machines; and
- the cost of monitoring

6.2 Extent of implementation of NCC

It was pointed out in section 4.2 that there is very little point in preparing an NCC unless it is implemented, to some extent, in most states. Interviews with major stakeholders indicated that most TAFE authorities implement those NCC which are relevant to their own programs and, although they are usually modified to suit their own needs, they generally use all the elements of the NCC which they implement.

In all the case studies, the situations were that at least 75% of the NCC syllabuses had been implemented in each TAFE authority and such changes that have been made were due to lack of major equipment and capital resources.

In the next sections, the means by which the degree of implementation of NCC can be enhanced in the states/territories are discussed.

6.2.1 Number of NCC implemented by TAFE authorities.

The number of projects undertaken in any one year depends upon the amount of money made available by the NCC and has generally been limited by the CPSG to between 10 and 15. The actual NCC projects funded for various years and the amounts made available are shown in Appendix E. Generally, funds do not allow for preceding the project with an industrial training needs analysis, for the preparation of associated materials or for monitoring of any sort. That is, money is allocated for only part of the total process.

6.2.2 The fidelity of users in conforming to the pre-specified goals of curriculum developers

Although involving the user in the decision-making increases the fidelity of implementation of an NCC (section 4.2.1), regardless of the degree of that involvement, there are nevertheless factors which tend to decrease fidelity. For example, the TAFE authorities implement only those NCC which are relevant to their own programs and even then modify them to suit their own needs. Further, regardless of the intention of the curriculum designers and the steps they take to ensure fidelity, fidelity of implementation will be affected by such factors as individual teaching methodologies and student management policies.

In the case studies where, in each instance what has been described as the research, development and diffusion model of curriculum design has been used, the perception of the degree of fidelity in implementation varied but it was generally considered that the intent and substance of the NCC syllabuses had been retained.

It is suggested that true ownership of an NCC syllabus in the sense that everyone concerned with its delivery has a sense of ownership as a result of being involved in the development process is neither possible nor desirable. Therefore another approach which will preserve the integrity of the NCC while at the same time accepting the variations inevitable in the diffusion of the program from the centre to the colleges, must be found. The answer to this approach can be found in the method of documentation.

6.2.3 The relation between the method of documentation and degree of implementation

There has been much discussion on the relationship between documentation of NCC and the degree to which a course will be implemented as envisaged by these responsible for preparing it. Members of the CPSG agreed that there was a relationship but there was no agreement as to what that relationship was.

In section 4.2.2 it was pointed out that the CPSG (1985b) has approved a form of documentation which allows the TAFE authorities to be flexible in the implementation of NCC. Fidelity with intent and purpose can be maintained as there is no attempt to prescribe in detail the method of implementation across each state/territory.

This form of documentation could lead to a nationally acceptable core of competencies within which special state/territory educational and training needs could be accommodated. Together with this documentation, national or cooperatively developed learning materials such as texts and assessment methodologies could be prepared. Such an approach would enhance local ownership and the use of nationally or cooperatively developed curriculum products.

The need for the local ownership of curriculum to be retained was noted in the automotive mechanics NCC case study (section A.2.1) where the task force was concerned that the NCC might be seen as a complete curriculum of training, when it was not, nor was it intended to be. Power (1987) expressed a similar concern. NCC developed by task forces should be constructed with a full understanding that they are core, not full curricula. He said that, in recent years, one or more states/territories had tended to press the view within national projects that a complete national curriculum, rather than an NCC, should be developed. He considered that these tendencies had failed to recognise the differences in educational needs which exist between states/territories and that there has been, in some cases, a dangerous tendency to press unnecessary curriculum requirements on some TAFE authorities. The CPSG has concurred with these concerns and has agreed to prepare a standard statement for national curriculum documents setting out the core nature of NCC. As this has not been done, it is RECOMMENDED that it should be.

It is also RECOMMENDED that the documentation for NCC as approved by the CPSG be accepted as the standard method of documentation. This documentation should include expected student competencies and be accompanied by nationally or cooperatively developed learning materials, such as texts and assessment methodologies.

6.2.4 Accreditation procedures and implementation

It has been suggested that accreditation requirements in the various states/territories have led to changes in the formatting and content of NCC before these courses have been submitted to the various authorities in the states/territories for accreditation. Of necessity, the requirements of accreditation have led to reducing the extent to which NCC can be implemented in the form prepared.

This problem was recognised by Broderick (1982) who recommended that an investigation be undertaken into the establishment of a TAFE national policy or procedure covering the accreditation of state awards (p 816).

This recommendation has never been implemented because it has been accepted that the responsibility for accreditation lies with the states/territories and that the only national process is registration within an agreed classification.

However the problem may not exist if the realities of the situations are accepted and NCC are developed with the appropriate documentation, that is, the form of documentation recently approved by the CPSG.

In other words the intention should be to prepare a framework curriculum which could be developed to meet the state/territory accreditation requirements and which could lead to the implementation of somewhat different courses between the TAFE authorities. This is consistent with the view that the essentials of the NCC content should be maintained and that the detail really does not matter.

On the other hand, the use of the long form of documentation has been an attempt to prepare courses which are virtually ready for accreditation in the TAFE authorities. As was pointed out in section 4.2.3 each state/territory has its own accreditation documentation requirements and to seek to prepare a single documented NCC which would meet them all is to seek after a lost cause.

By using of the recommended form of documentation together with nationally and cooperatively developed learning materials, the maximum use of NCC may be made while accommodating the accreditation requirements of the TAFE authorities.

6.2.5 Monitoring the implementation of NCC

Generally the CPSG has been opposed to systematic monitoring of the implementation of NCC on the grounds that such implementation is the sole responsibility of individual TAFE authorities and that it would be inappropriate to consider any form of national surveillance. Such monitoring as has been done has been the responsibility of the original task force convener and relies principally upon personal contact with interstate colleagues.

Interviews with members of the CPSG did not reveal unanimous opposition to monitoring of implementation. While there was some opposition in the terms expressed above, most were in favour of some sort of monitoring, although there was no agreement on how it might be done.

In the case studies, respondents were generally in favour of monitoring the implementation of the NCC. There was again little agreement as to how this might be done, but the establishment of a national monitoring group was not favoured.

A broad consensus of views is that, although monitoring of implementation of NCC is necessary, it needs to be achieved in a way which accommodates the responsibilities of the individual TAFE authorities; the development of such a method of monitoring is RECOMMENDED.

The following proposal attempts to accommodate that responsibility, but seeks to add a new dimension to co-operation between the authorities by providing for a shared monitoring of NCC implementation among them.

It is RECOMMENDED that the ACTD agree that:

a) the period of shared monitoring between the individual TAFE authorities of NCC implementation be the first two years from the date of approval to implement by the ACTD.

b) the relevant task force convener be responsible for monitoring the implementation and for that purpose to make one visit to each relevant TAFE authority in each of the two years following the date of approval in order to observe implementation of the NCC and to prepare a report on that implementation.

c) each TAFE authority be requested to establish a small local group to check and accept or amend the report of the task force convener on the implementation of the NCC in that authority. The local group should comprise the following persons:

    - the CPSG member (or a nominee), (chairperson);
    - a senior curriculum advisor;
    - the relevant NCC task force member;

- a senior TAFE person in the study area preferably with responsibility across the whole authority; and
- two industrial/occupational representatives, preferably with experience on TAFE/industry advisory committees.

d) the task force convener tender the report on implementation of the NCC in each relevant TAFE authority to the CPSG together with a consolidated report for approval for submission to the ACTD.

This approach is consistent with the cooperative, advisory, consultative approach to monitoring of implementation favoured by the respondents to the case studies.

6.2.6 Pressure on authorities for complete fidelity by users of NCC and the implications for funding

There are pressures emerging from Commonwealth Government policies which may lead to demands for more complete fidelity by users of NCC and for centralised monitoring of implementation by the separate TAFE authorities.

A TAFE working party has been set up by the Commonwealth Government. The complete terms of reference are not available but they are understood to include:

- options for structuring Commonwealth funding for TAFE in a way that emphasises relevance to industry training needs; and
- the advantages and disadvantages of locating TAFE programs in either CTEC or the DEIR (CTEC, 1987). With the establishment of the Department of Employment, Education and Training (DEET), this term of reference may no longer be relevant.

The CTEC saw as implicit in these terms of reference an approach to programs typified by a strict fee-for-service arrangement taking the form of a contract specifying the "goods" to be purchased, the quantity and the unit cost.

It is not too far removed from this position, to postulate that the "goods" to be bought would be an NCC syllabus implemented in full in every state/territory of Australia with no room for local modification. The price of being "paid" could be complete compliance with specifications. In other words a move to fee-for-service programs may require all TAFE authorities to implement the same program in any specific discipline in order to receive Commonwealth government financial support.

It is suggested that the response to this pressure for an increasing compliance with an NCC syllabus lies in the form of documentation recommended in section 6.2.3, that is the form approved by the CPSG together with expected student competencies and nationally or cooperatively developed learning materials such as texts and assessment methodologies. This would involve funding being earmarked as, in general, each project would require money for this purpose. This implies that, given static funding, the number of projects undertaken in any one year would be reduced, but that fidelity in implementation of those undertaken would be enhanced.

6.3 Maintenance of standards

It was pointed in section 4.3 that the word 'standards' has been used in this study to encompass;

- the relativity between courses in different colleges and authorities; and
- the relevance of courses to the changing needs of students in a society with rapidly changing technology.

Among members of the CPSG there was no general support for national maintenance of standards. One respondent considered that commonness of content led to de facto maintenance despite the opposite view that had been expressed in CPSG meetings (Section 4.3). Another saw national accreditation as possible if there is a change in the attitude that maintenance of standards was solely a TAFE authority responsibility.

However, the demands of consumers of NCC programs are such that the issue of national maintenance of standards cannot be ignored. There is a clear demand that graduates of TAFE awards be recognised as having met nationally acceptable standards so that they can move freely between the states/territories.

Therefore, while accepting the reluctance of TAFE authorities to relinquish their autonomy to any national body, a compromise has to be found between the demands of the consumers and the reluctance of the eight suppliers. It is unlikely that this compromise will be reached by statute, rather it has to be sought by cooperation between the authorities.

6.3.1 Monitoring of standards

It has been maintained that if the community is to be satisfied that nationally acceptable standards are being achieved, some form of public monitoring of these standards is necessary. The COSTAC working party recommended that the ACTD should examine the adequacy of NCC monitoring and review mechanisms. (COSTAC, 1987).

One way of monitoring standards would be for the consumers to do this themselves through courses accredited by their professional associations. However the fact is, that in the disciplines covered by many NCC, there are no professional associations which could undertake this task, while, with others, the level demanded by the professional associations are above that of TAFE (section 6.6.1).

Another way of monitoring standards is through the activities of the various state/territory licensing authorities and, for trade courses, training authorities. However there are difficulties in transferring between states/territories. For example, Parkinson (1987) noted that the licensing situation which applies when a tradesperson moves between states/territories is far from clear. It is generally accepted, but not necessarily always true, that state/territory licensing authorities will accept a trade certificate from any other state/territory as a prerequisite for licensing.

A paper prepared for the Victorian TAFE Board (Making changes nd, probably 1986) stated that the role played by training authorities in the validating of courses was vital as this role was too important to be left in the hands of teachers alone. However, a warning was sounded that trade committees which advise training authorities on courses are too easy to fill with those with particular sectional views and to ignore the legitimate interests of some part of industry or of the student body. For this reason trade committees alone should not set standards.

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It is understandable then, that as reported in section 5.4.6, the major stakeholders were divided on whether monitoring of standards should be undertaken on a national basis.

In the automotive mechanics and sheetmetal case studies there was strong support for a strategy for monitoring the maintenance of standards by establishing a national TAFE group. It was considered that such a group could carry out its role using a cooperative, advisory, consultative approach with minimum prescription.

It is argued in this report that there is a need for an ongoing strategy both to maintain the relative standards of courses between the TAFE authorities and the relevance of courses to the changing needs of society, but, because it is difficult to find a generally acceptable means of achieving this end, no recommendation on formal monitoring of relativity of courses between the authorities is made. A different approach to maintenance of standards is recommended.

6.3.2 Accreditation and registration and maintenance of standards

It was suggested in section 4.3.2 that the establishment of ACTA in January 1985 might require that CPSG take a more prominent role in the maintenance of standards of NCC. If it does not adopt that role it may be taken for it by ACTA in the fulfilment of its charter.

Major stakeholders were asked to comment on how they would see course standards being maintained both in their TAFE authorities and on a national basis. Only four TAFE authorities (B, E, H and I) were reported as having centralised accreditation authorities and of these, three (B, E and H) opted for a nationally centralised accreditation system. Two (G and I) preferred some unspecified compromise between a centralised and college system. The others would leave the maintenance to the colleges.

However all but one respondent (C) considered that national registration of courses would assist in achieving national recognition of NCC courses, although virtually all dismissed the incorporation of a points system such as that used in United States into any registration system.

It would seem that, at the formal level, the compromise on the maintenance of standards lies in using the accreditation processes of the states and the registration process of ACTA. All TAFE authorities have developed their own state/territory accreditation strategies for courses, including these based on NCC. Such strategies are peculiar to individual authorities and vary in design, application and control. Such differences are irrelevant as long as in the final outcome, the course as approved or accredited in the state or territory is accepted for registration by ACTA. In this way NCC courses would have national credibility.

It is RECOMMENDED that one role of the CPSG in the maintenance of relativity in standards between the states/territories be to encourage task forces to arrange for the registration of national core courses as conducted by the different states/territories with ACTA.

6.3.3 Nationally determined student assessment item banks

Assessment item banks have been developed in a number of NCC and those which have been developed are perceived as very helpful in maintaining standards However even those which have been prepared are not necessarily used directly with students.

Generally, however, it is recognised that student assessment item banks are desirable as a means of maintaining relativity of standards between TAFE authorities and it is RECOMMENDED that such item banks be developed as integral parts of an NCC. This material should be lodged with the National TAFE Clearinghouse (section 6.8.2(f)).

6.3.4 Exchange of examination papers

Members of the CPSG were almost totally agreed that exchange of examination papers and student scripts on a national basis was both desirable and feasible. There were only minor reservations. Respondent B questioned the practicality and C questioned the cost. Respondent F would exchange examination papers only.

Respondents to the case studies also considered that standards of student assessment would be maintained by exchange of examination papers and of a random selection of student scripts on a national scale.

It is RECOMMENDED that the CPSG arrange for exchange of examination papers and a random selection of student scripts in national core courses on a national basis. The examination papers should be lodged with the National TAFE Clearinghouse (section 6.8.2(f)).

6.3.5 Use of industrial needs analysis

Members of the CPSG agreed unanimously that all NCP should be preceded by a nationally determined industrial training needs analysis to ensure that the consequent NCC are relevant to industrial needs. This view was endorsed by the respondents in the case studies. Respondent B had a reservation. She argued that the costs involved in providing an effective training needs analysis might mean that some projects may never get funded. She did concede, however, that this might have the advantage that fewer projects are undertaken and completed more effectively. This unanimous view is accepted and it is RECOMMENDED that all NCP be preceded by a nationally determined industrial needs analysis.

6.3.6 Assessment moderation

The issue of maintenance of standards was taken further by raising with members of the CPSG the question of their maintenance by assessment moderation. This is an established procedure in tertiary education in the United Kingdom. Parkinson (1982) reported that the most important condition that the Council for National Academic Awards (CNAA) imposes upon institutions conducting approved courses is that the institutions appoint external moderators who are experienced in examining and who are experts of long-standing in the subject areas. The external moderators are nominated to the CNAA for its approval before appointment. They are required by the Council to report to the institution on both the examinations as set by the teaching staff and their impressions on how the course is conducted. It could be envisaged that ACTA might be empowered to require similar procedures in Australia.

Only two respondents, (G and I) were totally opposed to the idea, but it was generally agreed that there would be difficulties in implementing it. The right of TAFE authorities to reject any practice developed by cooperative efforts was seen to be at the base of these difficulties. Nevertheless it is considered an idea worth pursuing.

It is RECOMMENDED that the CPSG examine the possibilities of each TAFE authority appointing external moderators with suitable educational experience for each national core course and for the reports of the moderators to be submitted to the CPSG. Where the reports of the moderators indicate that any considerable variation in standard exists between the TAFE authorities or from the expected degree of relevance to existing industrial or commercial practice, these variations be taken up with the TAFE authority concerned.

Existing funds could be used by TAFE authorities to maintain course standards where any variations are brought to their attention. Acknowledging that enormous pressures are placed on TAFE for curriculum review and development, CTEC (1987a) pointed out that its funds have played a significant part in ensuring that TAFE systems have been able to maintain the relevance of TAFE curriculum by enabling a structured on-going program of curricula review and development, particularly national curricula in the trades area.

Specifically, the CTEC has recommended a grant of $32.2 million per annum for the 1988-90 triennium for the purpose of quality improvement in TAFE, including curriculum development. (CTEC, 1987b). It is RECOMMENDED that the state/territory TAFE authorities through the ACTD agree to allocate portion of these funds for the maintenance of course standards.

6.4 The cost-effectiveness of developing and implementing core curricula

6.4.1 Are NCC as developed value for money

It has been suggested within the CPSG that in many ways NCC are unsatisfactory halfway houses between state curriculum development and national/federal/commonwealth curriculum development. In adddition this unsatisfactory situation was exacerbated by their cost to individual TAFE authorities being at least twice that of similar courses developed independently within the authorities.

The question has been asked whether NCC were worth the cost when there were few obvious and tangible benefits. On the other hand it has been argued that these concerns were short term when, in the long term, the high establishment costs would be offset by much lower subsequent costs. In other words the CPSG itself has not been sure whether NCC are value for money. On the other hand there was a view that the degree of implementation itself warranted the cost of development. Another view was that saving money had never been an issue in deciding to produce an NCC - the overriding consideration had been an attempt to attain greater consistency between the states/territories.

In the case studies there was no agreement that the NCCs were any more effective than locally developed curriculum products, and only marginal agreement that they were less costly.

6.4.2 Distortion of TAFE authority prorities by NCC

It is generally agreed that NCC projects distort the priorities of TAFE authority curriculum development.

6.4.3 Continuance of CTEC funding

Although there is no certainty that NCC are value for money, it was generally agreed that NCC projects should be continued even if CTEC funding were withdrawn.

CTEC funding of national curriculum projects has been fairly steady over the last three years, namely $200 000 in 1985 (CTEC, 1984) approximately $210 000 in 1986 (CTEC, 1985) and $225 000 in 1987 (CTEC, 1986).

There is no guarantee that this funding will continue but TAFEAC in its report for the 1988-90 triennium, (CTEC, 1987c) noted that the review and updating of thousands of courses offered by TAFE authorities is a major task which can be assisted by sharing curriculum resources, and while TAFEAC expected that the mechanisms for undertaking NCC can be varied and improved, it recommended continuation of funding. It seems then, subject to unforeseen developments, CTEC funding for NCC will continue.

6.4.5 Cost-benefit of joint ventures in curriculum developement

The concept of private enterprise funding of the development of NCC was supported.

6.5 Benefits to students and teachers

6.5.1 The need for adequate resource provision.

To obtain maximum student benefit the provision of adequate resources is necessary. The CPSG (1982c) expressed concern that often those involved with the planning, design and development phases of NCP may not fully take into account the additional physical and human resources which may be required for the implementation of courses.

a) Quality curriculum materials/resources

Jones (1983) identified a major benefit of the NCC concept as its demonstrated capability of providing quality curriculum material/resources. The case studies have indicated that these benefits are not necessarily delivered to students. For example in the automotive mechanics NCC no nationally approved student learning materials, computer assisted learning strategies or study texts were prepared, although in general terms this was one of the aims of the task force. A booklet of practical assessment sheets was completed but was not used directly.

b) Capital resources and major equipment.

As a general rule it was not considered that lack of capital resources and major equipment had adversely affected the implementation of NCC-based courses, although centralisation or modification of the courses to adjust to the resources available may be necessary in some cases.

This general view was not always reflected in the case studies. In the automotive mechanics NCC case study, lack of capital resources and lack of major equipment were seen as important constraints on the maintenance of standards, while in the sheetmetal NCC case study some problems with lack of major equipment such as special machines were reported.

Maximum student benefit should be the principal aim of the implementation of any NCC, and the provision of adequate resources is a fundamental part of achieving that aim. It has been recommended in section 6.1.2(d)) that the feasibility study take into account the cost of the total resources required.

6.6 The opinions of bodies outside TAFE

6.6.1 Views of licensing and professional bodies.

Generally the introduction of NCC has made vocational courses more acceptable across Australia to licensing and registration authorities.

However the fact that there is an NCC in any particular discipline does not necessarily make the curriculum acceptable to associations professional associations.

In the case of automotive mechanics, the trade level NCC is not acceptable for membership of the Institute of Automotive Mechanical Engineers (IAME).

6.6.2 Expectations of industry on implementation of NCC

Work in developing NCC has proceeded on the assumption that it has the general support of industry and commerce and it is generally agreed that industry has perceived positive benefits in the NCC. Both the general interviews and the case studies have shown that industry expects NCC to be implemented in full, particularly where licensing and registration are involved.

The CTEC (1987a) warned that some of the expectations of industry are unrealistic. Particularly there was a concern at a shift in emphasis from broad-based vocational education to narrow-based training due to industry pressure.

The CTEC maintained that TAFE has been responsive to industry needs where industry has articulated its broad requirements and that it should be wary of industry demands on TAFE for job specific skill training where these demands may reflect merely a desire of industry to minimise its own expenditure on training.

As each industry or occupation is not homogeneous and training needs within the industry or occupation are not unique, demands of employers can be in conflict. In these circumstances the primary purpose of TAFE is to provide the labour force with adaptable skills.

The CTEC (1987a) stated that there is a clear-cut need for a precise understanding among industries, industry representatives and organisations, unions and their representatives about objectives methods and the obligations of employers. Committee structures must be in greater harmony with the agreed objectives and members of employer organisations and unions must secure greater understanding of the appropriate roles of government and industry. Policies on NCC must be developed with these objects in mind.

But, there is another side to the story. Industry is frustrated by at least two difficulties. The first stems from a perception of TAFE as being unreceptive and impervious to the needs of industry. Even where industry is ready to articulate its requirements, it has no confidence that its requests will be listened to, let alone acted upon. This perception was indentified in both the automotive mechanics and sheetmetal NCC case studies. There is one relatively simple answer to this difficulty. When a task force or advisory committee is formed to undertake an NCP, the CPSG should consult with the appropriate employer organisation on the desired industry representation on the task force or advisory committee and this is RECOMMENDED accordingly.

The second flows from the inability of TAFE to take binding decisions at a national level. White (1987) noted that, even where the ACTD endorses and agrees on curriculum structures required by industry, there appears to be no compulsion on individual state TAFE authorities to comply with those decisions. He described the situation as both confusing and frustrating for national industry bodies attempting to co-operate with TAFE in developing curricula. He suggested that it was extremely wasteful to develop a curriculum, have it accepted and endorsed by the ACTD and then subject it to the further requirements of TAFE authorities before it can be introduced. These views encapsulate the frustrations felt by industry and commerce at the lack of fidelity in the implementation of NCC courses. The recommendation in section 6.2.3 is designed to overcome that frustration.

Many employers saw a solution to their problems in the introduction of national examinations. In fact, the matter was never far from the minds of many employers. However it is clear that the cost of establishing a system of national examinations would be considerable and could not be met by governments. If employers are keen on a national examination system in any specific disciplines, perhaps they might discuss with TAFE authorities a self-funding system where those who wish to undertake the examinations pay the cost. Precedents for this are discussed in the automotive mechanics case study. A further example is provided by the Welding Institute which conducts national examinations funded from student fees. No recommendation is made on the issue of national examinations in NCC, principally because it is not considered to be the most effective way of sustaining either fidelity of implementation or standards. The approach recommended here is assessment moderation which was discussed in section 6.3.6.

6.6.3 Effective feedback

The major stakeholders were asked whether feedback on the views of bodies outside TAFE on the effectiveness of NCC were best obtained from:

- formal networks such as state/territory industrial training bodies; or from
- informal networks involving TAFE colleges and relevant industries.

Opinion was divided: some considered both channels of communication invaluable; others the more formal level the proper channel; another would use as many methods of feedback as possible and still others did not know. One respondent (A) noted that industrial training bodies had the better potential for providing feedback, but that this potential had never been realised.

6.7. The role of the CPSG in the development and implementation of NCC

6.7.1 Criteria for selection of projects

The CPSG was very conscious of observing the rights of the states in making decisions on selecting projects, for if the resulting NCC is to be implemented, it is important that states/territories have a commitment to the decisions. This need to observe the rights of states was summed up by one member of the CPSG who said that the selection of projects at the national level was seen as being simply the collective expression of the perceptions of authorities regarding the importance of projects.

Interviews with members of the CPSG indicated that they considered the existing selection criteria (section 4.7.2) generally to be acceptable with the addition of consideration of the existing degree of commonness. Nearly all respondents to the case study questionnaires would agree. Most of them, while accepting the existing criteria considered that they should be regarded as guidelines only as there will always be some desirable project which will not meet the criteria as set. However, one respondent to the sheetmetal questionnaire (H), was very outspoken in his view that an NCC in a discipline which is established across Australia is a complete waste of taxpayers' money, because the syllabuses developed independently by TAFE authorities will be virtually common. He advocated that only those vocations which are not common across Australia or which have not yet had syllabuses developed should be considered for NCC (section B.4.2(a)(ii)).

There may be issues affecting current Australian national interests which should be taken into account when determining whether a project should be undertaken. No TAFE provider can ignore:

- the decline in the Australian manufacturing base due to the lack of competitiveness in domestic and global markets caused among other things, by lack of adaptation to technological change and associated work practice, changes in materials and new approaches to marketing;
- the Australian trade deficit due, in part, to structural changes in world markets such as the effects of trading blocks (European Economic Community) and market surpluses; and
- the need to maintain the Australian defence capacity by sustaining an industrial base to protect it against the vagaries of changing foreign policies.

Parkinson and Franklin (1980) quoted Abbey (1980) who criticised educationists for not understanding the economic processes which affect their practices and said that the historians and sociologists of education have not equipped themselves to understand the links between the changes in the education system and changes in its politico-economic context.

There has also been criticism by the working party appointed by COSTAC of both the selection criteria and the mechanism for selection. It noted that, since 1979, only about 30% of core curriculum projects had been for trade subjects and that in 1987 only two approved projects related to trade courses and neither of those involved a full review of a basic trade course (COSTAC, 1987). (It should be noted in this context that TAFE is a much wider concept than basic trade.) The working party argued that, within the present NCC development process, there is scope for:

- broadening the range of sources involved in suggesting possible subject areas for NCC development; and
- broadening representation on the CPSG to take account of priorities as seen by industry, business and state training authorities.

Consequently the working party made two recommendations.

- Representation on the CPSG should be broadened to take account more easily of the views of industry and training interests outside the TAFE system.
- The criteria for project selection should be modified to take account of views outside the TAFE system and of broad national priorities and that COSTAC should have an input to the process of modification. The factors which the working party considered should be taken into account were similar to these outlined above.

It was also recommended that the task of advising on national training priorities should be taken up by the Australian Council on Employment and Training (ACET) as it has the responsibility to promote and monitor the development and implementation of national employment and training strategies. Further it was recommended that COSTAC should monitor the effectiveness of the response of CPSG to identified training needs.

On the matter of the recommendation of the working party of COSTAC that representation on the CPSG be broadened, it should be realised that it already contains representatives of COSTAC and what was formerly DEIR. The argument that more effective communication between industry and CPSG will be enhanced by broadened representation must be balanced against the fact that there is no single industry view and that the CPSG is in danger of becoming unmanagably large.

However the argument for modification of criteria is very strong. It is clear that TAFE authorities will find it necessary to ignore the constraints of cost effectiveness and state rights in developing and implementing NCC (or even national curricula) where the programs are seen to be of sufficient national importance. In fact the CPSG has worked on modification and has consulted groups from ACET and DEIR (CPSG, 1987a). It has decided to direct its tasks to be consistent with national priorities as enunciated from time to time by the Commonwealth Minister for Employment, Education and Training (CPSG, 1987d).

It is RECOMMENDED that, in selecting NCC projects, the demands of the national interest be considered during the feasibility study. In particular views of ACET and the appropriate national ITCs should be sought.

Another important issue in selection is the number of projects which are undertaken in any period. It was pointed out in section 2.1 that funds allocated for particular NCP do not allow for a total project. The history of unachieved aims documented in the case studies suggest that more funding for fewer projects might be more effective. It is RECOMMENDED that the number of projects undertaken in anyone period be limited to those which can be completed according to the specifications of the feasibility study and within the funds available.

6.7.2 Effect of the CPSG on the development and implementation of NCC

Major stakeholders and respondents to the case studies identified a number of effects that the CPSG had had on the development and implementation of NCC. The most important were:

- the CPSG had produced a positive improvement in the quality of NCC products due to the overall input of experienced senior curriculum managers;

- the CPSG has provided an essential intermediary role between task forces and the ACTD; and

- the CPSG has been responsible for the setting up of more relevant and effective task forces than those which may have emerged without the knowledge and experience of the CPSG.

6.7.3 Ongoing self evaluation

The CPSG has discussed its role in the evaluation of the implementation and standards of NCC many times but generally this has been seen as a role of TAFE authorities and nothing has been done to undertake such evaluations on a national basis.

Although this situation is consistent with the formal view of the CPSG, the fact is that members are by no means unanimous in that view. They are divided on whether national monitoring of both implementation and standards is desirable.

The respondents to the case studies agreed that both implementation and standards should be monitored. Although opinions on mechanisms for this differed, there was consensus that it should not be the role of the CPSG.

The CPSG in discussing its role in self-evaluation decided to develop a consolidated statement on itself. The statement has not been produced.

It should be noted that, although there has been much discussion of the self-evaluation role of the CPSG, there have been few tangible outcomes. Conceivably the initiation of this project has had the effect of delaying such self-evaluation until a report is produced.

However there is another possibility which might lie in the administrative and follow-up functions of the CPSG itself. A reading of the case studies will show decisions apparently left unmade, deferred and not followed up, or made and not implemented. Some examples which are identified in this study are:

- the automotive mechancis task force was concerned that the NCC might be seen as a complete curriculum of training, when it was not, nor was it intended to be. The CPSG agreed with this concern and agreed to prepare a standard statement setting out the core nature of NCC in national curriculum documents. No such statement has been prepared. (section A.2.8)

- the sheetmetal task force recommended that, when the NCC in sheetmetal was introduced and implemented, a national survey should be conducted to ensure that the syllabus adequately covered the requirements of Australian industry. The CPSG deferred this activity and it has never been taken up. (section B.3.2)

- in March 1985 the chairman of the CPSG wrote to the DEIR suggesting that officers of that department might meet with the sheetmetal task force in order to discuss the possible cooperative development of resources. Such discussions seem never to have been held and the item has not been raised in the CPSG since Febrary 1986. (section B.3.15)

- the real estate task force recommended to the CPSG that the draft national core syllabuses for sales person/branch manager and real estate agents be:

  - approved by the CPSG;

  - forwarded for comment to those associations and authorities representing the real estate industry;

  - forwarded by the CPSG to the ACTD for approval; and

  - implemented as soon as possible by all Australian TAFE authorities.

  There is no documentation of the CPSG considering these recommendations (section C.4.2).

The documentation of the CPSG is such that it is not clear whether decisions have been made or not. This has led to confusion in task forces as to their precise responsibilities. For example, in February 1984 the convener of the sheetmetal task force sought guidance on what the CPSG envisaged as the monitoring mode of an NCP and the part that the task force should play in that monitoring. The question was not answered. (section B.3.12)

It is RECOMMENDED that the CPSG establish procedures to ensure that all recommendations placed before it are considered, all decisions on those recommendations documented and disseminated to those affected by the decisions and, where appropriate, action taken to implement the decisions.

6.7.4 The operation of the CPSG in summary

TAFEAC (1987c) in its advice for the 1988-90 triennium noted that:

> "the activities of the Steering Group and (these) national curriculum projects are currently being evaluated by the TAFE National Centre for Research and Development. It is expected that various proposals will be forthcoming as to how the mechanism for undertaking national core curriculum can be varied or improved" (para 3.4.6 p 38).

Nothing is ever so perfect that there is no room for variation or improvement and the mechanisms adopted by the CPSG are no different from any other process. In the opinion of many who have been consulted, there is scope for some improvement. What is suggested here is designed to make better what is already most effective. Indeed some issues have already been taken up by the CPSG.

The general conclusions of this study of the implementation of NCC and the role of the CPSG in that implementation in so far as variations or improvements might be suggested, are:

a) the techniques of curriculum development used by task forces have tended to be those which apply best to established vocations with fairly homogeneous work forces. The possibility of using more search-oriented methods should be considered;

b) before the CPSG authorises an NCP to proceed, it should require a feasibility study to determine whether the conduct of that NCP is justified;

c) the research, development and diffusion model of curriculum design which is commonly used in NCC development does not enhance the degree of fidelity in their implementation;

d) the CPSG prepare a standard statement for national curriculum documents setting out the core nature of NCC.

e) the current approved form of documentation together with nationally or cooperatively developed learning materials will help overcome the disadvantages of that design model;

f) monitoring of the implementation of NCC is necessary, but needs to be achieved in a way which accommodates the responsibilities of the individual TAFE authorities. The CPSG should be involved in this monitoring;

g) the current documentation of NCC provides a framework curriculum which can be developed to meet the accreditation needs of the various state/territory authorities;

h) the issue of the national maintenance of standards cannot be ignored and a compromise must be reached between the demands of the consumers and the reservations of the eight suppliers;

i) **the suggested compromise is that the CPSG encourage task forces to arrange for:**

- the registration by ACTA of national core courses as conducted by the different states/territories;
- the development of student assessment item banks on a national basis;
- the exchange of examination papers on a national basis;
- an examination of the possibility of each TAFE authority appointing external moderators.

j) NCC projects commissioned by the CPSG distort the internal priorities of TAFE authority curriculum development;

k) there is no agreement that NCC as they are currently developed are value for money;

l) a major benefit claimed for NCC, that is quality curriculum materials/resources, is not necessarily delivered to students;

m) the selection criteria for NCC projects should contain a strong emphasis on the demands of the national interest; and

n) procedures should be established to ensure that all recommendations placed before the CPSG are considered, all decisions on those recommendations documented and disseminated to those affected by the decisions and, where appropriate, action taken to implement the decisions.

6.8 Some other issues

6.8.1 Commonwealth-state relations in TAFE and the implications for NCC

The Commonwealth Government has appointed a working party to give consideration to:

- options for structuring Commonwealth funding to TAFE in a way that emphasises relevance to industry training needs; and

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- the advantages or disadvantages of locating TAFE programs in either CTEC or DEIR. (With the abolition of CTEC and the inclusion of responsibility for TAFE in the proposed Employment and Skills Formation Council, this question is probably no longer relevant.)

Implicit in the first of the above is that Commonwealth funding for TAFE should develop on a fee-for-service basis.

CTEC maintained that such a change would cause a major setback in TAFE development with severe adverse consequences for national objectives such as the development of national curricula. This is because areas of operating expenditure, such as curriculum development, which are vulnerable to cost cutting will be neglected. (CTEC, 1987).

Such undesirable consequences should be avoided and it is RECOMMENDED that the view of CTEC that the Commonwealth Government should operate in partnership with the states to support quality of TAFE provision be accepted.

6.8.2 The relation between the CPSG and the TAFE National Centre

Since the establishment of the CPSG in February 1982 there has been some misunderstanding in the TAFE community over the relative roles of the CPSG and the TAFE National Centre. This misunderstanding has manifested itself in a number of issues which have been of concern to the CPSG.

a) The functions of the CPSG with regard to the Centre

At the first meeting of the CPSG in February 1982 it was agreed that the Centre would be one of the bodies to which the Group would direct its recommendations. Included in the agreed functions of the group were:

- the recommendation of priorities among curriculum projects to the Board of the Centre; and
- the provision of advice to the Centre on curriculum projects (CPSG, 1982b).

In June 1985 the CPSG redefined its role and recommended to the ACTD that it should include the provision of advice to the ACTD on curriculum projects initiated by the Centre. This, it was stated, was one of the original roles of the CPSG (CPSG, 1985a), but a reading of the terms of reference as reported in the minutes of the original meeting (CPSG, 1982b) suggests that, although the CPSG was to offer advice on:

- priorities among curriculum projects to the ACTD and the Board of the Centre; and
- curriculum projects to the Centre,

there was no provision for it to advise the ACTD on any aspects of curriculum projects which the Centre was actually undertaking. Regardless of the fact that the Centre had not been invited to comment or whether this advice was one of the original roles of CPSG or not, such advice was by the CPSG to be desirable (CPSG, 1985a).

In September 1985 it was reported that the ACTD had confirmed that the role of the CPSG included the provision of advice to it on the identification of national curriculum projects but it did not confirm that it had a role in advising the Centre. The CPSG sought further clarification on this latter issue, but nothing more on it is recorded.

The precise situation is far from clear, but it can be concluded that the CPSG may advise the Centre, as it sees fit, on its priorities in curriculum projects and on their conduct; but it has no role in advising the ACTD on the conduct of those projects by the Centre. With regard to the former the CPSG has been invited by the Centre to provide advice (Hall, 1986b). In this whole context, it should be noted that the Centre currently undertakes very few curriculum projects.

b) The provision of secretariat services

Originally the secretariat services were provided by the Centre. On occasions the value of a permanent secretariat was acknowledged (CPSG, 1986f), but in December 1986, it was reported that the ACTD had agreed that the secretariat service be provided by the office of the chairman of the CPSG (CPSG, 1986b).

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c) Development of distinctive letterhead

From its inception, the secretariat of the CPSG had conducted correspondence on behalf of the group using TAFE National Centre letterhead. At the December 1984 meeting, the need for a distinctive CPSG label on correspondence was raised and it was agreed that South Australian TAFE should liaise with the TAFE National Centre on this matter (CPSG, 1984d). The first drafts of letterhead were unacceptable to the ACTD, but in December 1986, it was reported that the ACTD had agreed to CPSG letterhead which was an adaptation of ACTD letterhead.

d) Uncertainty on the separate roles of the CPSG and the Centre

At the June 1985 meeting of the CPSG it was reported that there was uncertainty in TAFE regarding the roles of the CPSG, the Centre and the ACTD, and that steps should be taken to clarify these roles (CPSG, 1985a). This concern was re-expressed in June 1986 and it was proposed that the CPSG should endeavour to strengthen its identity as a standing committee of the ACTD (CPSG, 1985f).

An offer by the Executive Director of the Centre to prepare a paper explaining the relationship between the CPSG and the Centre with regard to curriculum research projects was accepted. This paper was tabled at the April 1987 meeting (CPSG, 1987).

e) Location of meetings

It was agreed at the June 1985 meeting that clarification of the separate roles of the Centre and the CPSG would be helped if the CPSG held some of its meetings at venues other than the TAFE National Centre (CPSG, 1987).

In December 1986, it was reported that the ACTD had agreed that the place for three of the four CPSG meetings in any year should be in the home state of the chairman with the fourth perhaps being held in other states/territories or at the Centre (CPSG, 1986b).

f) The role of the National TAFE Clearinghouse.

In December 1986 it was reported that the ACTD had agreed that the Centre through the National TAFE Clearinghouse maintain CPSG publications and documentation. This could include nationally determined student assessment item banks (section 6.3) and examination papers (section 6.3.4).

In the automotive mechanics NCC, the task force convener was expected to compile a list of relevant materials at six monthly intervals and submit it to the clearinghouse officer in the local TAFE authority, but this had not eventuated and subseqently the proposal was rejected by some TAFE authorities. With regard to the real estate NCC, the training development officer of the REIQ urged the development of an information bank (Griffiths, 1987) while Jagger and Trowbridge (1987) advocated a national bank of case studies in real estate.

At the June 1987 meeting it was proposed that:

- each state and territory TAFE authority each year produce and distribute a catalogue of existing and new educational resources available for distribution in that state and thereby available for circulation across the nation;
- each state and territory authority produce a summary of educational resource development projects planned and in progress. (CPSG, 1987b).

This proposition overlooked the fact that the mechanism for dissemination of materials already exists and that, so far, it is not being used although its use is recommended by the COSTAC working party. (COSTAC, 1987)

If the National TAFE Clearinghouse is to fulfil its responsibilities for the maintenance of CPSG records, then it is necessary for the secretariat and task force conveners (or other designated officer where other management methods are used) to deposit all relevant documentation with the clearinghouse officer in the appropriate local TAFE authority and this is RECOMMENDED accordingly.

CASE STUDY A: THE AUTOMOTIVE MECHANICS NCC

There is much detail in this section which may not be of interest to those readers who wish only to have an acquaintenance with the othercomes of the case study. Such readers are referred to Section A.2.17 and A.3.8.

A.1 Reason for selection

The automotive mechanics NCC was developed by the usual approach of a CPSG-managed task force providing an NCC syllabus. As indicated in section 2.6, the production of the original syllabus document in 1982 was based on the courses provided in each state and territory and pre-dated an industrial needs analysis which was carried out later (1983) by the National Retail Motor Industry Training Committee (NRMITC), now the Australian Automotive Industry Training Committee (AAITC) in cooperation with the ACTD and other interested parties (NRMITC, 1984). It was expected that the industrial needs analysis would reveal technological changes in the industry as a consequence of which the course would be reviewed. The possible effect of technological change on an established NCC syllabus was the reason the automotive mechanics NCC was taken as a case study.

A.2 The history of the automotive mechanics NCC - the aims and the achievements

In 1980, the Automotive Advisory Committee of the South Australian Department of TAFE made submissions to the NRMITC and to the South Australian Director General of TAFE for the development of a national core syllabus in automotive mechanics. The committee identified the major advantage arising from a national common core syllabus as being the development of common standards, resulting in the increased acceptance of tradespersons and students between states/territories. The committee also considered that the development of common core syllabuses would have the greatest benefit in those trade areas which are practised in all states and territories and in which large numbers of students are involved. On this basis the automotive mechanics trade was considered a priority area for development. (ACTD, 1981a). Following appropriate endorsement, a proposal was drawn up for consideration by the ACTD at its November 1981 meeting. The proposal was accepted by the conference and a task force to undertake the project was established.

The original task force contained eleven members nine of whom were TAFE officers or teachers. One was representative of the state/territory training commissions and the other of the NRMITC. An employer representative criticised this lack of balance of industry representation and said it was an example of the unreceptive attitude of TAFE to the real needs and requirements of industry. Another commented that TAFE authorities tended to select the industry representatives they wanted rather than consulting industry training committees. The task force was to complete its task within one year and report to the ACTD at the end of 1982 (ACTD, 1981b). In fact the final report was submitted to the CPSG in November 1985.

The project was initiated at the first meeting of the CPSG in February, 1982. Expenditure of $12 100 had been approved by September 1983 and a further $28 500 was sought for 1984. (Furber, 1983c).

Although originally there were eight terms of reference, the project expanded as it progressed and during the course of the project, 16 aims in all were identified.

The original terms of reference were to:

a) develop a national core syllabus and national standards for the trade of automotive mechanics;

b) liaise with appropriate national automobile chamber of commerce and state industry groups and government authorities/commissions;

c) foster co-operation between teachers in the various state TAFE departments;

d) promote the dissemination between states of teaching information relevant to the particular occupation area;

e) promote the preparation and sharing between states of teaching materials such as text books and audio-visual teaching aids;

f) facilitate the professional development of automotive teachers in Australia;

g) complete the documentation of the national core syllabus by October 1982 and submit to the chairman of the CPSG.

h) evaluate and report on the validity and effectiveness of the national core syllabus. (Mathers, 1982).

A.2.1 The development of a national core syllabus for the trade of automotive mechanics

It was intended that the national core syllabus would be a statement of minimum core knowledge, skills and curriculum practices which had been agreed upon by TAFE authorities as being commonly applicable to the needs of automotive mechanics students. The core syllabus would therefore be a minimum framework. Each TAFE authority would require an expanded curriculum to cater adequately for local needs and to describe fully all the curriculum practices appropriate to its own individual educational and administrative system (Furber, 1983).

The task force submitted a draft report to the CPSG in October 1982 (Furber and Jones, 1982a). To that time it had:

- developed terms of reference for its activities and responsibilities to the CPSG;
- defined the target for its initial activities - this was the passenger car and light commercial vehicles;
- developed a rationale for an automotive mechanics NCC;
- developed a national comparison of existing automotive mechanics courses for each of the TAFE authorities;
- developed a skills/knowledge matrix on automotive mechanics for the compilation of syllabus data from each of the TAFE authorities; and
- developed a national core syllabus document which represented a minimum syllabus statement for each of the eight TAFE authorities.

In September 1983 the task force reported that:

- a national syllabus had been completed and endorsed by the CPSG;
- the draft NCC document had been completed for the consideration of the task force. The document included specific national standards, practical assessments, available resource materials and resource implications (TAFE NCC, 1983).

The national core curriculum in automotive mechanics was tabled as a working document at the CPSG meeting in December 1983. It was recommended that the document be endorsed for implementation in 1984 with a likely revision later as a result of the national survey of the automotive industry which was to be conducted by the NRMITC. (section A.2.9a). This survey is discussed in more detail below. (TAFE, NCC, 1983a). The working document was noted by the CPSG, but seems never to have been formally approved.

It was noted above (section 4.1.1(a)) that the ACTD expected that the normal procedure would be for an industrial review to be undertaken before an NCC syllabus was finalised. Accordingly the wisdom of undertaking a national occupational survey after the development of the NCC was questioned. It was decided that the NRMITC should be made aware that parts of the survey which it was undertaking may have been done already. The NRMITC survey was seen as a useful check and validation of the NCC (CPSG, 1983c).

Therefore it was agreed in September 1983 that South Australian TAFE as the convening authority would examine the NRMITC survey results and ascertain the need for amendments to the national core syllabus document (Furber, 1983d). The CPSG allocated $2700 for this purpose.

A summary of the preliminary results of the NRMITC survey was published in April 1985. (Australian Motor Industry Training Research, nd, probably 1985). On receiving the preliminary results, the task force considered that the next stage was for the survey results to be discussed by industry, training authorities and TAFE at the state and territory level with detailed reactions being sent to the NRMITC so that a national viewpoint could be developed. If several state bodies concluded that substantial curriculum change to state/territory courses were desirable, a NCP would be proposed. If the changes required only a "fine-tuning" to the NCC, a small working party was to be given the task.

However, when the task force submitted its final report to the CPSG in November, 1985, it was noted that the final report of the survey conducted by the NRMITC (by then the AAITC) was still not available (Nagel, 1985c). The report has since been completed and, although the task force convener has circulated a request for any implications arising from the report among the TAFE authorities (Nagel, 1986) no revision of the NCC has been undertaken as a result. This could be due to the report not being well received by some TAFE teachers in automotive engineering.

Although prepared without the benefit of an industry survey and never endorsed by the CPSG or ACTD, it was generally agreed that the production of the NCC had achieved a great deal in providing a common focus for curriculum issues for the automotive mechanics trade. If further substantial changes in training proved to be necessary, the NCC was perceived as a firm base on which to commence any further NCP.

However, the task force was concerned that the NCC might be seen as a complete curriculum of training, when it was not, nor was it intended to be. Each TAFE authority complemented the core with material regarded as necessary for industry in its own state or territory (Nagel, 1985b). The CPSG concurred with this concern and agreed to prepare a standard statement for national curriculum documents setting out the core nature of NCC (CPSG, 1985a). No such statement has been prepared.

Since the completion of the national core syllabus by the original task force, a further project was proposed to facilitate the development of a national curriculum which would encompass the new technological information which has been supplied to TAFE by vehicle manufacturers (Irving, 1985). It was proposed that a national task force be created to ensure input from all authorities, but with Victoria and New South Wales having the major co-ordinating role. Manufacturers were willing to provide information on both current and likely future technologies but were keen that this should be provided once only to a central point and that courses should be undertaken on a national basis. These two conditions have posed difficulties.

The CPSG approved the creation of the task force with the development of a national curriculum encompassing new technological information as one of its priorities (CPSG, 1985c). It agreed that the sources of information should include vehicle manufacturers (local and overseas), overseas study tours, equipment manufacturers and suppliers, suppliers of materials and component parts and industry groups (including the Federated Chamber of Automotive Industries [FCAI]) (CPSG, 1986a). It also agreed that the project manager should be responsible for describing the industrial and educational context within which automotive courses are conducted in Australia, including the structure of the industry, training programs available, the role of training authorities, licensing authorities and the roles of manufacturers, retailers, consumers and suppliers.

In its report to the CPSG, the task force proposed a national development process to establish a bank of courses which would have national acceptance by the automotive industry and once established, keep the bank up-to-date (Irving, 1986). This proposal was unacceptable to the CPSG. Nevertheless it was agreed that it should be discussed with a representative from industry and the project manager, (CPSG, 1986b).

In a paper prepared for that meeting, Cameron (1987) maintained that courses in the automotive industry were not keeping pace with the rapid escalation of high technology componentry and systems and that new tradespeople were not sufficiently skilled to benefit properly from high technology courses conducted by manufacturers. In fact they had found it necessary to conduct remedial educational exercises. The FCAI was prepared to assist in course development and review courses with TAFE on a regular basis and suggested that if there were a national development process (through a national coordinating body) the development load could be spread, thereby reducing costs and accelerating course development.

The CPSG agreed that the proposition should be considered by a working party in conjunction with the task force. The consideration should have regard for cost-benefits and possible alternative strategies (CPSG, 1987a).

The working party reported to the CPSG in July 1987 (Northedge and Hutchison, 1987). The proposition that a bank of courses which would have national acceptance by the automotive industry was not addressed directly. However the question was asked whether an NCP was the most appropriate means for vehicle manufacturers and TAFE vehicle studies providers to ensure that graduating students have current technological skills and knowledge. Even it if were, it was considered that the maintenance of the NCP would need the continuing commitment to it of TAFE and manufacturers and that this continuing commitment might not be possible. The working party concluded that the implementation, Australia-wide, of courses based on curriculum development being centrally commissioned and carried out by the Victorian TAFE authority for other TAFE providers was questionable and recommended that any proposals for national curriculum development for the automotive industry be referred to the CPSG through existing mechanisms. The CPSG is currently considering this recommendation.

A.2.2 The provision of guidelines and a timetable for the successful implementation of the NCC in all TAFE authorities in 1984

The task force commenced activities in June 1982 (Hermann, 1982) with the object of achieving a substantive implementation of the NCC at the beginning of 1984. The phases of implementation were identified in the NCC document (TAFE, NCC, 1983a). They were adoption, enhancement and maintenance. Although it was recommended that the core syllabus be implemented progressively in 1984, no timetable was given. The questionnaire examines the degree to which the NCC in automotive mechanics had been implemented in TAFE authorities by 1986.

A.2.3 The development of national standards of performance for the trade of automotive mechanics

This was an initial justification for the initiation of the project. The draft report which was submitted to the CPSG in October 1982 (Furber and Jones, 1982a) indicated that the task force had developed a broad specification of the minimum standards required for student performance. National technical standards of performance were specified for each objective in the NCC (TAFE, NCC, 1983a).

A.2.4 Liaison with appropriate automobile chambers of commerce, state industry groups and government authorities/ commissions

Throughout the process of developing the NCC there was consultation between the task force and the NRMITC, the Australian Automobile Chamber of Commerce, state and territory training authorities, the Australian Council of Trade Unions and selected apprentice trainees.

More recently there has been closer liaison, with the establishment of the task force to facilitate the development of a national curriculum which will encompass the new technological information supplied to TAFE by the vehicle manufacturers. The task force contained representatives from major vehicle manufacturers, relevant unions and AAITC (Irving, 1985). As a further development of the work of the task force, the FCAI has recommended that TAFE/FCAI course consultancy groups be formed (Irving, 1986).

A.2.5 Fostering of cooperation between teachers in the various TAFE authorities

It was almost unanimously agreed in the responses to the interviews that the value of NCC to teachers included exchange of ideas, better ownership of curriculum and the development of a wider understanding of curriculum implementation (section 5.6.2). There was no documented evidence of any deliberate fostering of cooperation beyond the activities of the task force in the development of the automotive mechanics NCC. However this is one of the issues examined by the questionnaire.

A.2.6 The promotion of the dissemination of teaching information relevant to automotive mechanics between the TAFE authorities

The approach to this task was to be the preparation of a list - using an agreed format - of films, audio-visuals, videos, theory notes, practical projects, film strips, slides and loop films. (TAFE, NCC, 1983a).

In March 1983 the CPSG agreed that:

> ...in future when any relevant film, audio visual or video is developed by an individual state or territory, the TAFE Clearinghouse be notified, to ensure inclusion of the information in the Initiatives in TAFE booklet... (CPSG, 1983c, p3).

It was agreed that the most effective way of doing this was by the task force convener compiling a list of relevant materials at six monthly intervals and submitting it to the clearinghouse officer in the local TAFE authority. An examination of the clearinghouse catalogues suggested that no films, audio visuals or videos which have been developed by an individual state or territory for automotive mechanics had been submitted.

It is reasonable to question why the dissemination of material should be limited to audio visual material. Certainly this was not the original aim of the task force. The National TAFE Clearinghouse was hoping to include a wide range of teaching materials, but the need for this is not accepted by all TAFE authorities, although the procedure has been recommended by the COSTAC working party on the Kirby recommendations. (COSTAC, 1987).

In the meantime another means of promoting dissemination of technological information, in the automotive industry in particular, has been mooted. In December 1985, Irving proposed the development of a TAFE network to ensure that all vehicle studies providers had access to up-to-date technological information. He proposed that a national task force be created to establish a national TAFE vehicle studies information network and that, because Victoria had established the Automotive Industry Research, Development and Training Centre (AIRDTC) and New South Wales the New Technology Course Development Centre (NTCDC), these states have the major coordinating role in the task force.

It was reported that the industry was prepared to provide information on the condition that this was done through one point only. In effect the offer was conditional on the willingness and ability of TAFE as a national organisation to develop an information sharing mechanism. The manufacturers would not be prepared to deal individually with every single provider (Irving, 1986).

Specifically, Irving (1985) recommended to the CPSG that it establish a mechanism to

- ensure that all states have firsthand information on current and new technologies as soon as it became available; and
- share course development information and rationalise such development.

This recommendation was accepted by the CPSG. Implementation of the recommendation was specified as the primary purpose of the task force and $12 000 was earmarked for the project.

In March 1986, the CPSG approved the following recommendations of the task force:

- A national TAFE network be developed to ensure all vehicle studies providers have access to up-to-date technological information, curriculum and resources and to provide a national forum for two way communication between industry and TAFE (CPSG, 1986a). The dissemination of information was to be both across and within authorities. It was proposed that initially the network would be coordinated in conjunction with the AIRDTC and the NTCDC (CPSG, 1986c).

- A single contact point within each TAFE authority responsible for disseminating information, technology or curriculum through internal networks be established. (CPSG, 1986c). Industry and retail groups were to be encouraged to work through each authority contact centre and these centres would be responsible for immediate dissemination to other network members. It was considered desirable that initially the groups work through Victoria and New South Wales (CPSG, 1986c).

- A computer-based inventory of information for new and proposed courses and resources and new and existing technologies and related information be established (CPSG, 1986a). It was envisaged that a person with computer expertise would liaise with all authorities to ascertain the methods for establishing a computerised data base. Each authority would have retrieval access to the information and be able to input information but would be able to alter or update only with the authority of the task force or of the Vic/NSW network centres (CPSG, 1986c).

In September 1986 the task force reported to the CPSG that:

- an operational strategy for a national TAFE network had been prepared in draft form (CPSG, 1986d). The AIRDTC was proposed as the one industry point required by the FCAI and this together with the NTCDC were to establish and maintain the network;

- a single contact point in the other states/territories had been established. Each was to be responsible for ensuring that information flowed within each state/territory via the appropriate internal mechanisms (Irving, 1986); and

- The computer-based information system had been investigated and rejected due to the high costs involved (CPSG, 1986d).

The CPSG commented only on the centralised network proposal. It expressed considerable concern at the recommendation that two centres only be established as the primary TAFE contact points for the receipt of information on changing technologies from the FCAI. Doubts were expressed about whether the proposed centres would communicate sufficiently comprehensive information to other states. If this did not happen, the latter would be disadvantaged by the project. It was considered that the FCAI should maintain strong links with each TAFE authority (CPSG, 1986e).

The task force prepared a second draft report in November 1986 (Irving, 1986). The CPSG considered that the second report was a restatement of the original position of the FCAI wanting contact with Victoria and New South Wales only. It was agreed that CPSG should discuss the project with a representative of the FCAI (CPSG, 1986b).

In a paper prepared for this discussion, Cameron (1987) pointed out that no formal method existed for manufacturers to provide material to TAFE. Consequently many TAFE providers made unilateral approaches for information to manufacturers who had found it impossible to satisfy the variety of requests. However, manufacturers were anxious to provide information if it could be done cost-effectively. For this reason they had requested that they supply information to one location only from where it could be disseminated to all TAFE authorities. Cameron advocated the establishment of a national coordinating body.

The CPSG appointed a working party to discuss the problem with the task force and report to the July 1987, meeting (CPSG, 1987). The report (Northedge and Hutchison, 1987) raised a number of difficulties with the proposition that the industry supply information to one location only. Two of these difficulties are discussed below:

- Lack of definition of the proposition

  Northedge and Hutchison stated that a limited study showed that possibly hundreds of manufacturers could be involved, whereas the original proposition included only the five or six major vehicle manufacturers. Further there was concern that the proposed information appeared to be limited to mechanical, electrical and electronic automotive technology applied to engines and transmissions of light passenger vehicles. There was a danger that other areas of automotive mechanics such as heavy commercial vehicles, heavy equipment servicing, motorcycles, light marine engines and small engined equipment and other areas of vehicle technology such as sophisticated exhaust systems, finishes and tyres would be excluded.

- Reluctance of manufacturers to provide information on the latest technology

  The Labour and Economic Division of the DEIR was quoted as saying that the response lag in training in the new technologies had been exacerbated by the secrecy associated with the development of new vehicle models. It was suggested that the concept of centralised information supply by industry must be questioned if the information to be made available was not the latest technology.

- Lack of evidence that manufacturers will remain committed to the project

  Northedge and Hutchison found it difficult to envisage an agreement between TAFE and manufacturing which would be binding on the latter over the years.

It is suggested here that all of these difficulties raised by Northedge and Hutchinson have been based on the assumption that, if current practices were continued or some decentralised system of obtaining technological information in the automotive industry were introduced, there would be a well-defined process by which industry would be more willing to provide more up-to-date technological information than it would through a system which it is advocating itself. Alternatively, even if Northedge and Hutchison have not made the assumptions suggested and concede that the difficulties articulated above might be less in a centralised system, they appear to consider that the lessened difficulties might not be worth the cost.

The TAFE Board in Victoria commissioned the preparation of a proposal for the development of an information system for, in part, sharing new technology in the motor vehicle and parts industry. (Brandon, 1987). The estimated cost to users (assuming 200 outlets) was capital $200 000 and recurrent $846 000 per annum. The cost to providers in each authority was $70 000 per annum. The proposal for an information system was seen as technologically sound, but management questions, such as which authority should to prepare the information for inclusion, needed resolution.

Northedge and Hutchison concluded that on political, administrative and financial grounds the proposal for the establishment of an electronic network for the sharing of information on automotive technology did not appear to be feasible. It should be noted that such a network was never proposed by the industry - it merely offered to provide information to one locality.

Northedge and Hutchison recommended that:

- the existing mechanisms for the provision of information on new technology, components and vehicles by automotive manufacturers to the Australian TAFE authorities be strengthened;
- the National TAFE Clearinghouse enhance information sharing arrangements at state/territory TAFE authority levels; and
- the ACTD exhort automotive manufacturers to recognise a location in each state/territory TAFE authority through which it can provide information on new technology components and vehicles.

These first two recommendations imply a greater use of the National TAFE Clearinghouse. As indicated above there has been little, if any, use of this facility to disseminate information and the need for its use is not accepted by all TAFE authorities. The third recommendation is in effect a recommendation not to agree to the request of industry to be able to provide information to one location.

The matter was considered again at the July 1987 meeting of the CPSG. It was agreed that the objectives of the project which were originally to develop a national TAFE network to ensure all vehicle studies providers access to up-to-date technological information, curriculum and resources and to provide a national forum for two way communication between industry and TAFE were no longer clear (CPSG, 1987c). It was also agreed that there was a general lack of knowledge as to what were the requirements of the automotive industry in regard to information sharing and TAFE. It was suggested that there was a need to speak to key people within each TAFE authority and key people among the manufacturers to determine:

- what the future information needs of TAFE authorities would be;
- what information the manufacturers expect to make available; and
- the costs involved in information sharing.

A report was to be prepared for the October 1987 meeting. This report (CPSG, 1987d) suggested that it would be appropriate to prepare two project briefs

- The first brief would be directed towards the need for information in automotive technology and the ways and means of distributing it to TAFE authorities. This has been accepted as a CPSG project for 1987.

- the second brief would be targetted at assessing the need for a national TAFE computer network. This was to be referred to the ACTD.

A.2.7 Quality curriculum materials/resources - The identification and initiation of the additional curriculum resources (including major plant and equipment) and teaching/learning materials (such as text books and audio-visual aids) necessary for implementation with a view to sharing between TAFE authorities

In 1984 the task force proposed the development of educational resource packages including videotapes, national texts and a question bank on a national basis. In particular, the inadequacy of the major text books then being used in TAFE colleges had become apparent and it was considered that it might be necessary to consider writing national texts (Furber, 1983c).

The CPSG decided that the development of educational resource packages should be undertaken by the individual TAFE authorities with South Australian TAFE guiding the activity (CPSG, 1983a).

In September 1986 the task force established to facilitate the development of a national curriculum to encompass the new technological information, commented that the progression of the project into a curriculum package development phase was crucial to maintaining industry involvement. It was envisaged that the management of curriculum package development would be the responsibility of the AIRDTC and the NTCDC. (CPSG, 1986d).

There is no documentation suggesting that any materials have yet been produced. However a list of current recourse materials was prepared. This issue is taken up again in the discussion of the questionnaire responses (section A.3.2 (f)).

A.2.8 Plan for the inclusion of other sectors of the automotive mechanics trade into the nCC framework

The initial activities of the task force were concerned with passenger cars and light commercial vehicles only.

In March 1983 the task force recommended that:

> ...a feasibility study on similarity in courses between states and across courses/streams in the following: Automotive Mechanics (L.V.), Plant Mechanics, Heavy/Road Transport, Earthmoving, Agricultural Industrial, Small Engines (Motor Cycles, Marine, Stationary), Brake Mechanics be undertaken with a view to beginning the development of additional curriculum products on a national basis... CPSG, 1983c, p.3).

The recommendation was accepted in principle, but, if the project became more than a feasibility study, it was considered that it should become a separate project with its own terms of reference. If the task force wished to take the project beyond the feasibility stage, it was to submit a further proposal to the CPSG.

The CPSG deferred the feasibility study until the NRMITC survey was completed (CPSG, 1983a). It would appear that it has not been undertaken.

However other automotive-related NCC have been approved by the CPSG. They include automotive studies technology, automotive body repair and transport electrical/ electronics. Each has its own task force.

In addition, if the project to develop a national TAFE network to ensure all vehicle studies providers have access to up-to-date technological information, curriculum and resources (section A.2.6) were to proceed, it was also to include panel beating, vehicle painting, automotive electrical, vehicle body building, vehicle trimming, parts interpreters and automotive machinery (CPSG, 1986a).

A.2.9 Develop a national core program for industry on-the-job training to complement the TAFE national core program

The development of a common core curriculum for on-the-job training undertaken by industry in the automotive mechanics trade was first suggested in COSAC and resulted in proposals being submitted to the Training Review Standing Committee (TRSC) of the National Training Council (NTC) for $30 000 to mount a study to provide data on tasks performed in industry and to relate existing training arrangements to those tasks (Ray, 1983).

In the event, there have been separate, but related, activities associated with this aim. Neither was an initiative of the task force.

a) Occupational analysis survey by the NRMITC

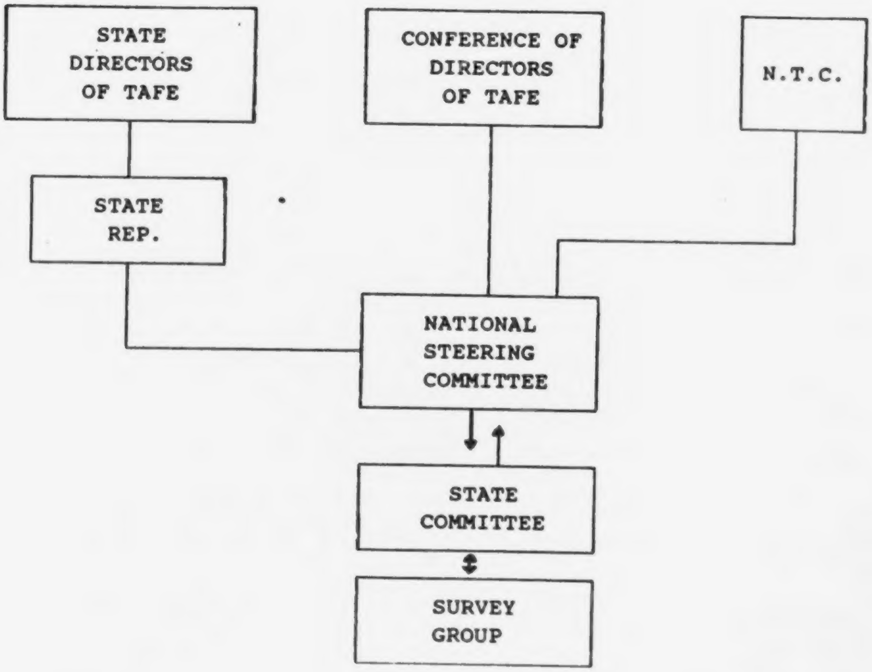
This survey was referred to in section A.2.1. The NRMITC decided to undertake in cooperation with TAFE and industry an occupational analysis. The automotive mechanics task force intended to use the results of that survey to develop a national core program for on-the-job training to complement the TAFE NCC (Furber and Jones, 1982b).

In March 1983 the task force recommended that:

> ...the CPSG approve the .... model (Figure 5) for the involvement of the TAFE in the proposed National Retail ITC survey...(CPSG, 1983c, p.3).

It was noted that the NTC had approved a training development grant for the survey and that these funds had been made available to second a person from the retail motor industry to complete the on-the-job component of the training program. It was agreed that funds should be sought to support TAFE participation in the survey (CPSG, 1983c)

In September 1983 the task force proposed that it should assist in the NRMITC survey of the automotive industry to ensure that data which would be of use in the definition of on-job/off-job objectives were collected. These objectives were to be used in the development of an integrated cooperative industry/TAFE program for the training of automotive mechanics (Furber, 1983c).



STATE DIRECTORS OF TAFE
CONFERENCE OF DIRECTORS OF TAFE
N.T.C.
STATE REP.
NATIONAL STEERING COMMITTEE
STATE COMMITTEE
SURVEY GROUP

FIGURE 5

RETAIL MOTOR INDUSTRY DATA BANK (NRMITC)
TAFE REPRESENTATION FOR ESTABLISHMENT OF DATA BANK.

1. Members of the NCC task force be the TAFE representatives on the state committees.

2. A representative of the NCC task force by nominated for membership of the National Steering Committee.

3. The TAFE National Centre for Research and Development provide research advice for the National Steering Committee.

4. The functions of the Committees be:

4.1 National
- Design of questionnaire
- Processing of data

4.2 State
- Advice on survey document
- Distribution and collection of sumrvey documents

Source: Furber (1983b).

The CPSG noted that the NTC had intended to fund a major study of the automotive industry in 1984 and that this study was to include the development of a program to integrate the teaching of in-plant skills with the TAFE course. It did not approve the recommendation that the task force should assist with this study. (CPSG, 1983a).

In November 1983 the task force reiterated its recommendation that it should assist the NRMITC survey of the automotive industry to ensure that the data which will be of use in the definition of on-job/off-job objectives are collected. It was proposed that task force members be involved both at the state and national levels in the collection of data to ensure that specific data from which on-job training objectives can be defined were obtained (Furber, 1983d). The CPSG gave no authority to task force members to participate in the survey and the recommendation was subsequently dropped.

b) The preparation of an on-the-job competency list by COSAC

This survey which was separate from, but complementary to, the occupational analysis conducted by the NRMITC was to have been commissioned by COSAC.

The task force indicated that it wished to be involved in the working party which had been established by COSAC (Furber, 1984a). In the appendix to the working document tabled at the CPSG meeting in December 1983 (TAFE, NCC, 1983a), the working party recommended that two members of the task force be the TAFE representatives on the COSAC working party and that these task force members be involved in the process of integration of the NCC syllabus and the on-the-job competencies.

When the TRSC became aware of the NRMITC proposal to conduct an occupational analysis, it decided to explore the possibility of using the output of that project to satisfy its requirements of identifying on-the-job competencies. However the TRSC decided that this would take too long. It was therefore decided to locate tradespeople who were familiar both with the TAFE training system and the trade itself and draw upon their personal experience to specify in simple terms what training needed to be provided on-the-job across the trade (Ray, 1983).

A draft on-the-job training statement was produced for comment, but since then nothing has eventuated. (Blanksby, 1987).

A.2.10 To update/revise the existing basic training manuals for use on training automotive apprentices on-the-job

The task force recommended to the CPSG that in order to facilitate the

- provision of industry trainees with the required information to develop more effective on-the-job training programs for automotive apprentices, and the

- development of a mechanism to obtain a higher level of integration between TAFE courses and on-the-job training in automotive mechanics,

a recommendation be made to the DEIR that, after the national survey was completed, the results and the modified NCC based on this survey data be used as a basis for updating/revision of the existing basic trade manuals in automotive mechanics (TAFE, NCC, 1983a).

Although the CPSG affirmed the need for close links with the DEIR in the production of skills manuals, no revised skills manual has yet been produced as a consequence of the occupational analysis conducted by NRMITC or the on-the-job competency list prepared by COSAC (Blanksby, 1987).

A.2.11 Preparation of further basic training skills manuals covering these areas of automotive trade practice not yet treated by existing manuals

This was a parallel recommendation by the task force to that in A.2.10 above (TAFE, NCC, 1983a).

The implementation of this recommendation would have followed the planning for the inclusion of other sectors of the automotive mechanics trade into the NCC framework. (section A.2.8). As this has not proceeded, there has been no progress in the preparation of further basic training skills manuals.

A.2.12 The facilitation of the professional development of automotive teachers in Australia

There is no indication that the task ever specifically set out to achieve this aim. However much professional development can be incidental to the principal task and much may have been achieved. This question is examined in the questionnaire.

A.2.13 The evaluation of the validity, implementation and effectiveness of the automotive mechanics NCC

In June 1982 the task force decided to develop an evaluation timetable for the implementation of NCC by Australian TAFE authorities and to arrange for the conduct of an evaluation of the implementation of NCC (CPSG, 1982d). The development of an evaluation timetable was included in the program for 1983 and recommended to the CPSG (Furber and Jones, 1982b).

This aim was never pursued by the task force. Rather it recommended in December 1983 that the convening state (South Australia) be responsible for the monitoring of the NCC in all state/territories (TAFE, NCC, 1983a). This recommendation was not implemented.

A.2.14 Develop follow-up publicity to inform the Australian Automobile Chamber of Commerce (AACC), the Australian Automobile Dealers Association (AADA), the Institute of Automobile Mechanics Engineers (IAME) and the Australian Council of Trade Unions (ACTU) of the progress of the task force

An article was produced for the February 1983, edition of the Motor Industry Journal (MIJ, 1983). The article pointed out that the NCC appeared to be the answer to the need for a common language in the motor industry.

A.2.15 Advise industry that is it possible to put submissions directly to the CPSG for the development of NCC in the areas of automotive electricians and engine reconditioning

This was left to the NRMITC representative on the task force. A project for the development of a transport electrical/ electronics NCC has been initiated (section A.2.8), but this does not appear to have been as a result of a direct approach from industry to the CPSG.

A.2.16 Prepare three to six examples of teaching/assessment project sheets based on agreed format for consideration by task force members and investigate the possibility of preparing an envisaged 120 assessment project sheets and associated teaching materials, particularly by seeking TAFE funding

The task force recommended an allocation of $8 000 for undertaking the first part of this task. (Furber, 1983c). It recognised the need for shared development of teaching and assessment resources in order to:

- economise in production costs of teaching resources; and to
- ensure national standards were maintained by the use of common teaching resources.

The teaching project sheets were to be designed primarily for teaching in an individualised learning mode with maximum use of illustrations and step-by-step procedures.

The practical task assessment sheets were to be designed primarily for assessing achievement of skill objectives. It was envisaged that their use would ensure high degree of standardisation of achievement levels of objectives on a national basis.

It was proposed that the TAFE National Centre offer the opportunity to TAFE authorities to bid to develop a quantity of the teaching project sheets and/or the practical task assessment sheets. In their bids the TAFE authorities would specify the syllabus objectives to be encompassed and the funds required. The TAFE National Centre was to accept or reject bids as appropriate and in accordance with the funds available.

The task force was to have an advisory role on the content of the individual projects and the task force coordinator a liaison responsibility between the TAFE National Centre and the contracting TAFE authorities (Raine, 1983).

The recommendation that $8 000 be allocated for the development of national teaching/assessment project sheets was not accepted. It was agreed that assessment material should continue to be developed by South Australian TAFE (CPSG, 1983a).

In September 1983, the CPSG noted that, although it had allocated no funds for the production of teaching/assessment project sheets, $4 000 of $12 000 general budget allocation to the task force remained unspent. It also noted that the development of assessment sheets was proceeding well. It was emphasised that these sheets were to be regarded as guides only, and suggestions were sought on how maximum use could be made of them (CPSG, 1983d).

In February 1984, Furber (1984a) reported that a booklet of practical assessment sheets had been completed (TAFE, NCC, 1983b) and that it was to be distributed to task force members for trialling in 1984.

Nagel (1985b) reported to the CPSG that a report on the trialling of the practical assessment sheets had been received at a task force meeting in May 1985. It was reported that most states were not using the assessment sheets directly, but were using them for the production of learning materials which aimed to achieve the standards prescribed. The practical assessment sheets could not be regarded as a part of the NCC, but they did achieve the purpose of setting standards.

A.2.17 A summary of the achievements.

Of the 16 aims which were identified, four were clearly achieved. They were:

- the development of a national core syllabus for the trade of automotive mechanics (this has gone further than the original aim with the plans to keep courses abreast of technological developments in co-operation with industry);
- the development of national standards for the trade of automotive mechanics;
- liaison with appropriate automobile chambers of commerce, state industry groups and government authorities/ commissions; and
- the preparation of examples of teaching/assessment project sheets based on an agreed format.

In addition the following two aims which are difficult to document may have been achieved. They were:

- fostering of cooperation between teachers in the various TAFE authorities; and

- facilitation of the professional development of automotive teachers in Australia.

Three aims were achieved in part. They were:

- the provision of guidelines, and a timetable for the successful implementation of the NCC in all TAFE authorities in 1984. The NCC has been implemented to some extent in most states/territories - the actual degree to which this has been done was gauged by considering the responses to the questionnaire;

- the development of a national core program for industry on-the-job training to complement the TAFE national core program. The occupational analysis survey of the NRMITC was completed, but the associated on-the-job competency list to be prepared by a working party of COSAC remains uncompleted; and

- the development of follow-up publicity to inform interested parties of the progress of the task force.

This leaves half the aims unachieved. These were:

- the promotion of the dissemination of teaching information relevant to automotive mechanics between TAFE authorities. The general mechanism for achieving dissemination of teaching information has not been agreed between the TAFE authorities. Further differences in opinion on a proposal for the establishment of a single location for dissemination of automotive technological information have not been resolved;

- the identification and initiation of the additional curriculum resources (including major plant and equipment) and teaching/learning materials (such as text books and audio-visual aids) necessary for implementation with a view to sharing between TAFE authorities. This was left to the individual TAFE authorities with South Australian TAFE guiding the activity, and, although a list of current resource material was prepared, it seems that no materials have actually been produced;

- the preparation of a plan for the inclusion of other sectors of the automotive mechanics trade in the NCC framework. This aim was deferred and has not been considered;
- the updating/revision of the existing basic training manuals for use in training automotive apprentices in-the-job. No revised manual has been produced;
- the preparation of further basic training skills manuals covering those areas of automotive trade practice not yet treated by existing manuals. No progress has been made;
- the evaluation of the validity, implementation and effectiveness of the automotive mechanics NCC. This was left to the convening state; and
- the provision of advice to industry on the possibility of industry itself proposing submissions direct to the CPSG for the development of NCC.

What many would see as the essential aims of the task force have been achieved while other desirable, but perhaps less critical, aims were left uncompleted or unaddressed. This has implications which have been discussed in the recommendations for the setting of task force aims (section 6.1.2).

Further the task force set out to achieve the goal recommended by Kirby (1985) (section 4.6) and agreed in principle by the CPSG that the development of on-the-job training statements should be co-ordinated with the development of common core curricula. COSTAC (1987) also saw this as a means of bringing together the educational and general training priorities of TAFE systems with the specific trade training and labour market focus of training authorities. However, the work of the task force was discontinued before the total task could be completed.

A.3 Interviewing the TAFE officers who were involved with the development and/or implementation of the automotive mechanics NCC.

Of the 16 questionnaires distributed, eleven were returned and content analysed. The only authority not represented in the responses was the Northern Territory. In addition, four respondents were interviewed.

As with the content analysis of the interviews with the major stakeholders, the home states/territories of particular respondents are identified by letter. No distinction is made between different respondents from the same state/territory and therefore the same letter can identify varied, even conflicting, responses.

A.3.1 The range of alternative approaches to NCC development

a) The national task force approach

As pointed out in sections 4.1.7 and 6.1 the preliminary investigation development technique together with the task force management approach were used in the development of the automotive mechanics NCC. Respondents were asked if they considered whether the national task force approach produced more effective curriculum products, that is, curriculum products which were more relevant to the existing and potential needs of industry, than those developed by the local TAFE authority.

All but one (H) of the ten who answered the question considered that the national task force approach produced curriculum products which at least would be equally as effective as those developed by local TAFE authorities. Of these, four considered the national task force approach produced more effective curriculum products and one,(G),that they would be marginally more effective.

One respondent (E), who considered that the effectiveness of curriculum products would be about the same, regardless of whether they are produced by the national task force approach or locally, indicated that the curriculum products of some states had become more effective as a result of the criteria established by the task force. The inference drawn here was that the effectiveness of the products developed by the two methods is now relatively similar because of the criteria developed by the task force and that, if the NCC task force had not been established, some TAFE authority curriculum products would not have been as effective as they are now.

b) Some options to the task force approach

Respondents were asked to consider three options to the task force approach, and were asked to answer some questions on them. The details of these options are discussed in section 4.1.4.

i) Cooperative project method (Option A, Question 2, Appendix C)

Respondents were asked their opinions on how they saw the effectiveness of the cooperative project method in developing a NCC as compared with the traditional national task force model.

The ten respondents who answered the question tended to be divided in their responses. Three said that they thought the method would be marginally more effective, three that the method was worthy of consideration and three that it would be less effective. There was no opportunity to express an opinion that the method would be very much more effective than the traditional national task force model, but the nature of the responses reviewed suggested that such an opinion was not strongly held. The other respondent considered that this method would be marginally more effective, but doubted whether, if the intent were to produce a syllabus document alone, the activity would justify the expense involved.

ii) Delegation to a TAFE authority (Alternative approach B, Question 2, Appendix C)

All eleven of the respondents answered this question; five considered that this approach would be considerably less effective than the traditional. The other six were split equally between the other three options of equally effective, marginally less effective and worthy of consideration.

iii) Use of a project officer (Alternative approach C, Question 2, Appendix C)

This approach tended to be received far more favourably than the former two. Three respondents considered that it would be equally as effective as the traditional model and four considered that it was worthy of consideration.

A respondent (B) from one of the larger states who considered that this approach would be equally as effective as the traditional approach had important reservations. The time taken for the project officer to visit each TAFE authority and receive effective input from their representatives would tend to cause a considerable delay in a project. He also doubted whether the project officer would find people in each TAFE authority prepared to devote the time to detailed interview that they normally devoted to discussion in a task force. This latter reservation was endorsed independently by another respondent (E) who pondered whether a single visit to each TAFE authority by the project officer would be sufficient to obtain all relevant information, and whether there would be time for additional visits.

c) The preferred option

There was no unanimous enthusiasm among the respondents to the automotive mechanics case study for any option to the established national task force method. If another method must be found, most would opt for the project officer approach.

d) The technique of curriculum development

As indicated in sections 2.6, 4.1.7 and A.1, the production of the original syllabus document in 1982 was based on the courses provided in each state and territory, and pre-dated an industrial needs analysis. That is, the technique of curriculum development was the preliminary investigation technique.

The disadvantage with this technique was that it was concerned with things as they were and therefore changes which could be foreseen were not incorporated into the curriculum, let alone possibilities for change with developing technology. However it was the most pragmatic technique at the time as it enabled the basics of the course to be identified for later confirmation by a survey.

A.3.2 The extent of implementation of the automotive mechanics NCC in all states/territories

a) The fidelity of users in conforming to the pre-specified goals of the curriculum developers

It has been pointed out in section 4.2.1 that the use of what has been described as the research, development and diffusion model of curriculum design has the danger of the curriculum being implemented in a form not intended by the designers. This model involves design in a central location with dissemination for local use.

In the automotive mechanics case study, the task force consisted originally of twelve members of whom four were practising teachers (Furber and Jones, 1982b). The emphasis was on the research, development and diffusion model of curriculum design.

i) Extent of implementation of syllabus content

Ten respondents answered the question. All but one indicated that at least 75% of the syllabus had been implemented in their authority and of these, four said that it had been totally implemented. As one respondent (E) commented, the automotive mechanics NCC comprised those objectives which were common to all states/territories and therefore it is not surprising that most were implementing it totally.

The representative of one TAFE authority (A) reported that his authority had not implemented the NCC in any way and indicated in his response that he had not seen an NCC syllabus.

ii) Degree of change in form and substance of NCC in the transition to the TAFE authority program.

Ten respondents answered the question. Of these, seven indicated that there had been minimal change to the NCC in the transition to the TAFE authority program; two (E and H) indicated a moderate change while one (E) a high level of change.

It is interesting to note that three respondents from the same TAFE authority (E) gave different responses, that is minimal, moderate and high level of change respectively.

That respondent who indicated a high level of change commented that the format of the NCC syllabus was modular and hence a high degree of change was required. Nevertheless the intent and substance of the NCC content and objective were retained in the authority syllabus.

The respondent who indicated a moderate degree of change commented that, originally, the NCC and the state curriculum were well matched but that technological change was requiring a change in syllabus which the NCC could not accommodate. It was noted in section A.2.1 that the final report of the survey conducted by the NRMITC had not been used to revise the NCC. It would appear that this lack of revision may lead to an increasing divergence of the separate TAFE authority courses from the NCC.

The one who indicated minimal change commented that originally a single NCC objective may be contained in some state objectives and vice versa but that ultimately, both courses contain the same material.

In the second TAFE authority where there had been a moderate level of change (H), it was reported that it had been necessary to make the objectives more specific in the state syllabus than in the NCC so that lecturers could understand the requirements.

iii) Constraints on TAFE authorities causing changes in the form and substance of NCC syllabus content products.

It was generally agreed that:

- lack of major equipment such as special machines; and
- lack of capital resources with which to upgrade buildings

were the principal constraints on TAFE authorities which caused changes in the form and substance of NCC syllabus content products.

It was also generally agreed that there was no:

- uniqueness of state/territory training needs;
- specialised features within the industries which the automotive mechanics occupation serves; or
- lack of adequate texts.

which would cause any changes to the course.

One unique constraint was raised by one respondent (H). The NCC was produced in modular format which was resisted by TAFE lecturers in that authority as many believed that it equated with self-paced learning strategies. It was not spelled out, but was probably implied, that self-paced learning is unpopular with lecturers in that authority.

iv) Proportion of NCC syllabus content in TAFE authority programs

This question sought similar information to that in A.3.2(a) (i). In that case the actual proportion of the NCC implemented in the states/territories was sought; here it was the extent to which the NCC syllabus content formed part of the TAFE authority program.

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Ten respondents answered this question. Generally it was considered that over 60% of TAFE authority programs consisted of NCC syllabus material.

b) Course presentation mode

Respondents were asked to indicate from one of four choices the type of course presentation used to implement the NCC based course.

All respondents answered this question,but the response from the TAFE authority which had indicated that it had not implemented the NCC was disregarded. It was considered that the implementation procedures for a non-NCC was irrelevant to the investigation.

The type of course presentation was evenly distributed among three of the choices offered:

- subject sequenced and presented by stages or years with theory, graphics and practical elements taught separately. One of the respondents (H) who preferred this type of presentation modified the reply by indicating that practical objectives tended to be taught by an individualised learning process because, owing to equipment constraints, all students were unable to do the same project at the same time.

- a systems approach using a modular construction with self-paced learning. One respondent (E) indicated that this method of presentation was used to some extent;

- a form of unitised presentation utilising the integration of theory, graphics and practical elements. One respondent (E) indicated that, although this type of presentation was being used, it was being seen as excessively expensive and unless what was described as 'productivity' were improved a reversion to subject sequenced presentation was likely. Another respondent (F) modified the response by saying that the approach used in that TAFE authority was a combination of subject sequencing and integration.

No one method of presentation was favoured across Australia. The challenge for curriculum designers was to present an NCC which is capable of use by authorities which use different approaches to presentation.

c) Curriculum materials/resources

i) Colleges in all TAFE authorities used locally prepared typed notes, work sheets, check lists, practical aids and models supplemented by lectures and demonstrations.

One respondent (H) indicated that he had a personal hope that the NCC would result in national texts. His authority was finding it difficult to continue upgrading its texts, workbooks and project books. He implied that it was to be regretted that the task force did not see its role as becoming involved in this area.

This was not a completely accurate representation of the view of the task force. It had a stated aim (section A.2.7) of initiating text books with a view to them being shared between TAFE authorities. However the CPSG decided that such development should be undertaken by individual TAFE authorities with South Australian TAFE guiding the activity. (CPSG, 1983a). It would appear that no materials have been produced but the task force did define standards by referring to current text books. These were to be the basis for the development of a national core text.

ii) Colleges in three TAFE authorities used locally produced self-paced learning packages in print form supplemented with film, film strip, video, etc. These three authorities were those which used a systems approach with a modular structure and self-paced learning.

One of the original aims of the task force (section A.2.6) was the promotion of the dissemination of teaching information relevant to automotive mechanics between the TAFE authorities. It was agreed in the CPSG that the task force convener should compile a list of relevant material and submit it to the clearinghouse officer in the local TAFE authority. It was suggested in section A.2.6 that this has not happened, yet the response to this question would suggest that material which could with advantage be available across Australia, has been prepared.

iii) No TAFE authorities indicated that they were using nationally developed learning material. This was consistent with the comment that no such material has been produced. However there was a list of current resource material in the NCC document.

d) The relation between method of documentation and degree of implementation

Three options were suggested:

i) A minimal NCC syllabus documentation with broad course aims and objectives and general content areas listed. TAFE colleges would then be free to interpret the syllabus in light of local needs (the short form).

Only one respondent (E) favoured this option.

ii) The NCC syllabus rewritten into a local short syllabus by the TAFE authority curriculum branch so that TAFE colleges would be free to interpret the syllabus in light of local needs.

Three respondents (from two TAFE authorities (A and E)) favoured this form of documentation. One of them suggested that the short syllabus should be supplemented by national item banks of theory and practical questions. Another went further. He suggested the development of learning materials of sufficiently high quality to satisfy TAFE authorities so that they did not waste resources developing their own.

iii) An NCC syllabus rewritten into a local syllabus form by TAFE authority curriculum branches so that minimum interpretation is left to college lecturers.

Seven (that is the majority) of the respondents favoured this approach which really amounted to a task force producing a syllabus, the syllabus being rewritten (by inference at length), and that minimum freedom of interpretation be left to the colleges. This could be interpreted as encouraging the development of eight separate courses across the nation, each inflexible within themselves.

However comments made by the respondents would indicate that such an extreme view would not be maintained. One advocate of rewriting NCC in to a local syllabus form suggested that the more curriculum material which can be developed nationally and used by all states/territories, the more cost effective the NCC activity should become. Another respondent suggested that national texts would assure some degree of uniformity at the college level as lecturers tended to teach from books rather than syllabuses.

Generally respondents seemed to suggest that they wished to maintain a fair degree of uniformity in automotive courses throughout their own authorities and would be happy to use the NCC syllabus if this were adequate. The inference drawn was that the inadequacy of the NCC syllabus was the reason for rewriting it into local syllabus form and, if there were nationally produced curriculum material, including texts, this would not be necessary.

e) Accreditation procedures and implementation

One respondent from Victoria noted that the need to incorporate the NCC syllabus into the Victorian syllabus in order meet the requirements of accreditation and the Industrial Training Commission had led to minimal change.

f) Monitoring of the implementation of the NCC program

Ten respondents answered the question and all agreed that the implementation phase of NCC-based programs should be monitored to provide feedback to all stakeholders who have supported its inception and development.

They were then asked which of three options of monitoring they would prefer.

i) State wide monitoring by individual TAFE authorities through say, a formal monitoring unit.

Three respondents (B, E and G) would favour this method.

ii) A formal national monitoring unit or group.

This was favoured by two respondents (E and F).

iii) A college-based monitoring unit.

This was favoured by four respondents.

iv) The tenth respondent (E) indicated that he preferred a national survey of the implementation with the results being distributed to all stakeholders. This survey should be supplemented with a national conference of lecturers every two or three years.

Generally respondents considered that the implementation of the NCC in automotive mechanics should be monitored. There was little agreement as who should do it, but the establishment of a formal national monitoring group was not favoured.

g) Type of monitoring preferred

Given that all respondents were in favour of some sort of monitoring, of implementation, they were asked to indicate the approach which they would prefer. Four options were suggested.

i) Three respondents (A, D and H) would prefer a cooperative, advisory and consultative approach.

ii) Four respondents would prefer a generally cooperative, advisory and consultative approach, but with some prescription in certain areas.

iii) Two respondents (E and F) would expect the monitoring to be conducted with a firm set of guidelines. One of these (E) would use the state mechanism for maintaining standards as the guidelines.

iv) Only one respondent (G) would opt for a supervisory unit acting in accordance with firm guidelines.

The majority of respondents would prefer a cooperative, advisory and consultative approach to monitoring with very little attempt at prescription. A unit to supervise monitoring was certainly not favoured.

h) Knowledge of the degree of implementation of NCC in TAFE authorities other than that of the respondents

Only three respondents claimed to have any knowledge of the extent of the implementation of NCC in other states/territories.

i) Summary of responses on implementation

Generally respondents indicated that at least 75% of the NCC syllabus had been implemented in their TAFE authority and that the material implemented made up the majority of the local TAFE course. There had been minimal change to the NCC in the transition to the TAFE authority program (that is the fidelity of implementation was high) and such changes as had occurred were the result of:

- lack of major equipment such as special machines; and
- lack of capital resources with which to upgrade buildings.

No particular mode of course presentation was common across the nation, nor were there any nationally developed learning materials in use. This lack of nationally developed learning materials may be the reason that the appropriate form of documentation to enhance implementation was seen to be the NCC syllabus rewritten into the local syllabus form by the TAFE authority curriculum branch.

Monitoring of implementation was favoured but there was little consensus on how this should be done. What was agreed was that it should be through a cooperative, advisory and consultative approach and that no formal national monitoring group should be established.

There was little knowledge of the extent of implementation of NCC between the TAFE authorities.

A.3.3 The impact NCC has had on the maintenance of standard between colleges and between authorities

a) Monitoring of standards - a strategy for its achievement

Of ten respondents, all but one (B) agreed that there should be a strategy for monitoring the maintenance of NCC standards; seven considered that the monitoring should be matter for a national TAFE group. The contrast with the attitude towards the monitoring of implementation, where a national group was opposed, will be noted.

It was generally agreed that the members of the national monitoring group should be:

- the convener of the task force;
- the state/territory CPSG member or nominee;
- two representatives of the industry from within the state/territory being monitored; and
- a senior teacher in automotive mechanics from within the state/territory being monitored.

Almost unanimously it was considered that the proposed unit would carry its role of maintaining standards using a co-operative, advisory, consultative approach with minimum prescription in certain areas. Even with minimum prescription, one respondent (E) had reservations about who should make that prescription.

b) Effect of change of form and in substance of NCC products in the transition to the rewritten local syllabus and classroom program on the quality of the curriculum product

In this question quality of a curriculum product was defined as its responsiveness to industrial needs as perceived by NCC designers and developers. The implication of the question was that the changes had affected the quality adversely.

Ten respondents answered the question and, of those, six considered that the quality of the curriculum product had been seriously affected, presumably adversely.

One respondent (C) considered any syllabus and curriculum product is in danger of being changed from that intended by the designers unless lecturers are consulted on implementation strategies and other desirable outcomes. The implication of his comment is that such consultation did not take place in the development of the automotive mechanics NCC. In fact the research, development and diffusion model of curriculum design had tended to reduce the fidelity of users in implementing the curriculum (section A.3.2.(a)).

Another (H) commented that the lack of specificity in the NCC was such that curriculum could be interpreted in a number of ways and that the local interpretation would be coloured by existing authority or college syllabus and procedures. It does not necessarily follow that this colouring would 'water down standards' but one respondent (G) thought that it would.

c) Effectiveness of a nationally determined assessment strategy in maintaining NCC standards

All but one (E) of the nine respondents considered a nationally developed assessment strategy would be effective in helping to maintain NCC standards. However one (H) of those who considered it would be helpful wondered if it would really be worth the trouble. Of the eight who supported the concept of a nationally determined assessment strategy, seven considered that that strategy should be moderated. They were divided as to whether the moderation should be by a national group or the relevant TAFE authority.

d) **Establishment of a nationally determined student assessment item banks**

It was pointed out in section A.2.16 that a booklet of practical assessment sheets had been completed for the automotive mechanics NCC but that these were not being used directly with students. Even so, only one respondent (H) was opposed to the concept of nationally determined student assessment item banks as a strategy in helping to maintain NCC standards across all TAFE authorities. Of those in favour, only one (F) was opposed to student practical test projects and assessable home assignments being included in the assessment item banks. Generally, it was agreed that there should be an on-going appraisal by the NCC task force convener or nominee.

There were two specific comments on the frequency of review

- one respondent (E) considered that the test items would have to relate directly to the course objectives and should therefore change when they do.
- another (H) considered that even a two-year period for test items would not be long enough. A new syllabus does not have much effect in the first year and in the second, the course is changed by the nature of the examination. Changing the test items at that stage would cause further changes in the course.

e) Exchange of examination papers

Representatives of all states/territories but two (F and G) considered that an exchange of examination papers and of a random selection of student scripts among TAFE colleges on a national scale would be a positive and useful strategy in assisting to maintain NCC standards. One, (E), went even further. He saw cost effectiveness being increased if examination papers were prepared for national use. Employers expressed similar views (section A.3.6.b).

f) Use of industrial training needs analysis

Respondents were unanimously agreed that the NCC project should be preceded by a nationally determined industrial training needs analysis to ensure that the NCC is responsive and relevant to existing and potential training needs.

In view of the circumstances applying in this case, this answer was particularly interesting. As pointed out in section A.2.1, a national occupational survey was undertaken after the development of the NCC and the curriculum has not been revised as a result of the survey. Also in section A.3.2(b), it has been pointed out that technological change is leading to changes in syllabus which cannot be accommodated within the NCC and this is resulting in an increasing divergence of the separate TAFE authority courses from the NCC.

g) Constraints on maintenance of standards

There was general agreement that the following constraints had affected, presumably adversely, the maintenance of NCC course standards.

i) Lack of capital resources to update buildings, workshops and laboratories;

ii) Lack of major equipment such as special machines in certain areas of curriculum;

iii) Lack of suitable learning materials such as self-paced learning packages and self-assessment schemes. One respondent (E) considered that if preparation of such material had been undertaken by the task force, there would have been a better result;

iv) Lack of suitable moderately priced text books; and

v) The need for the updating of some areas of knowledge and skills by teachers.

h) Summary of responses on maintenance of standards

It was agreed that there should be a strategy for monitoring the maintenance of NCC standards and that the monitoring should be a matter for a national TAFE group which would carry out its role using a co-operative, advisory, consultative approach with minimum prescription in certain areas.

It was considered that the development of nationally determined assessment strategies would be effective in maintaining standards. Such strategies included:

- the establishment of nationally determined student assessment item banks; and
- external moderation.

Further, if the NCC is to be responsive and relevant to existing and potential training needs, it should be preceded by a nationally determined industrial training needs analysis.

It was also agreed that standards could be affected adversely by change of form and substance of the NCC products in the transition to the classroom program and by the lack of sufficient physical resources.

A.3.4 The cost-effectiveness of developing and implementing core curricula in automotive mechanics

a) The balancing of benefits and costs

As best as can be determined $10 360 was spent in direct costs by the automotive mechanics task force. In the absence of any direct costing of the development of the automotive mechanics NCC and of any valuation of the benefits of the outcomes, any judgment of cost-effectiveness is necessarily subjective.

Respondents were divided between two opposite propositions:

- the benefits to students, teachers and non-TAFE stakeholders justify the costs of developing a nationally determined core curriculum. This view was put strongly to the CPSG by Cameron (1987) in advocating a national development process for automotive courses (section A.2.1); and
- the local development of a study area curriculum would be cheaper and produce equally effective curriculum products.

The balance of opinion was towards the former proposition, but only marginally. A number of respondents modified their replies with comments, four of which are given below.

The NCC was cheaper than the sum of the individual state costs. The NCC should be in the form of terminal objectives with assessment banks and practical skills mastery requirements. The delivery mode, attendance patterns and so on will be determined locally provided the course meets the minimum common skills requirement.

If the development of NCC goes only as far as syllabus documentation, the whole process is not cost-effective. If a whole range of teaching/learning packages and products are also produced at one point in Australia and not repeated by each TAFE authority, the NCC process would be cost-effective.

It all depends on how things are organised and managed. National developments which prevent the rewriting of curriculum several times over should result in quality curriculum at lower cost.

From a national point of view an NCC project must benefit all stakeholders.

b) The cost-effectiveness of approaches other than the national task force model

Respondents were asked whether they considered any of the following management approaches should be considered by the CPSG as a means of producing NCC more cost effectively:

- co-operative project method
- delegation to a TAFE authority
- use of a project officer (section A.3.1(a)).

The only other method which rated as an option with respondents was the use of a project officer.

c) Summary of responses on cost-effectiveness

There was no agreement on whether the development of a NCC was any more effective than locally developed curriculum products and only marginal agreement that it was less costly. The only approach to the development of NCC other than the national task force approach which might be considered more cost-effective was the use of a project officer.

A.3.5 The benefits of NCC to students and teachers

Among the aims of the automotive mechanics NCC task force were the fostering of co-operation between teachers in the various TAFE authorities and the facilitation of the professional development of automotive teachers in Australia (section A.2.12). Whether these goals have been achieved is not documented. There was no specific aim in relation to students although such benefits are implicit in the whole of the NCC process.

a) Quality of terminal competencies of NCC course graduates - a student benefit

Respondents were almost equally divided on whether the terminal competencies acquired by graduates of the NCC based course were better suited to meet the current and perceived industrial work tasks than those acquired by graduates trained under the earlier locally developed program. Obviously other clear benefits must be identified to justify the cost of developing the NCC.

Those respondents who did consider that terminal competencies were improved were asked to rate the importance of three factors in promoting that improvement. The fact that the NCC is the result of a national cross-fertilisation of ideas and opinions based on a reasonably high degree of common content was considered to be the most important.

Not as important as the above, but still relatively important was the need for the presence of national and state industrial representatives on the task force. In this case the only industrial representatives were the Manpower Development Executive of the NRMITC and a project officer from the South Australian ICTC. There was no direct representation from industry. This perceived lack of balance in the task force has been criticised by industry representatives.

The third factor was the need for the NCC to be preceded by an industrial analysis. As has been pointed out many times, this did not occur until after the NCC had been prepared.

b) Graduate mobility - a student benefit

Respondents were asked to give their opinion as to the relevance of graduate national mobility for automotive mechanics.

Most respondents considered graduate mobility highly relevant for automotive mechanics. One respondent (B) would restrict the relevance to border areas while another (E) suggested that NCC did not enhance mobility as mobility has always existed for automotive mechanics.

c) The benefits to lecturers

Respondents were asked to assess the relative benefits to lecturers. The factors as rated, in order of perceived benefit, were:

- a more enhanced TAFE image, both state and national, due to the higher expectations of industry for TAFE generally;
- staff development on a national scale for participants in NCC task forces and working parties arising from the exchange of ideas;
- the implementation of an NCC-based program tends to generate improved dissemination of information in the particular study area;
- the feeling of ownership by all participants, due to the higher expectations of industry generally;
- access to nationally determined student assessment strategies. These do not exist for automotive mechanics. It suggests that the respondents were advocating a benefit rather than evaluating an existing one;
- NCC tends to give effect to common national standards;
- a more industrially relevant course due to the national scope of the NCC-based program; and
- availability of nationally utilised texts and references. As there are none in automotive mechanics, this benefit could hardly be rated highly. Two (B and H) commented that absence of such material was unfortunate.

Of the aims of the task force, in the view of the respondents, one has been achieved, that is the facilitation of the professional development of automotive teachers in Australia.

d) **General benefits to students.**

Respondents were also asked to assess the relative benefits to student. The factors as rated, may be gathered into three groups:

i) The portability of vocational qualifications of graduates on a national scale. This was rated as the most important benefit.

ii) The development of resources including:

- nationally approved student learning materials. This is a benefit expected, rather than a benefit delivered. One respondent (E) commented that the NCC did not go far enough on the development of learning materials;

- nationally approved computer-assisted learning strategies. This was again undelivered; and

- a list of nationally approved study area texts which would ensure common student knowledge and skill across the nation.

iii) . more relevant and effective terminal competencies than these provided through earlier courses and greater mobility of students currently enrolled in courses. These were rated as the least important benefits.

The mobility of graduates was seen as the most important benefit to students whereas mobility of transferring students was seen as the least important. Both benefits were part of the original justification for the project (section A.2). However, while the NCC has enhanced both outcomes, the portability of transferring students was not seen as important - rather it is a desirable side effect.

e) The most important benefits.

For lecturers, the most important benefits of the NCC were seen as the enhanced image of TAFE in its industrial constituency and staff development on a national scale. This latter outcome was an original aim of the task force.

For students, the most important benefit of the NCC was the portability of qualifications of graduates. The availability of nationally available learning materials, computer-assisted learning strategies and texts were seen as potential benefits which had remained undelivered. There was no agreement as to whether the NCC had improved the terminal competencies of graduates.

A.3.6 The opinions of bodies outside TAFE.

It was considered important to have, at first hand, the view of employers on the automotive mechanics NCC. This was done by interview.

a) General awareness within the automotive industry of the NCC course.

By and large respondents to the questionnaire considered that the automotive industry was not aware that their employees were being trained by an NCC-based course. Although an attempt had been made to inform employers through an article in the trade journal, (MIJ, 1983), one employer representative interviewed had not seen the course.

b) Views of employers on the need for and value of NCC

It was considered that employers recognised a need for a single TAFE course in automotive mechanics across Australia. As Bryant (1987) put it, Australia is one country and automotive businesses operate in a similar way across it.

A single TAFE course should develop more effective student/ graduate terminal competencies than state/ territory-based courses, because it had been developed more recently. The fact that there had been no revision of the NCC based on the NRMITC survey was regretted (Bryant, 1987).

c) Extent of employer expectation of implementation of NCC based course

Only those employers who were aware that a course existed could have expectations about the degree to which it should be implemented. Respondents to the questionnaire generally agreed that those who were aware of such a course would expect it to be implemented totally. However they were uncertain on whether aware employers considered that any positive benefits stemmed from the implementation. This uncertainty may have existed because the respondents thought that the degree of implementation is less than employers would expect.

Both Bryant (1987) and Miller (1987) commented that employers would expect the NCC to be implemented fully and that they would probably favour national examinations to ensure full implementation. Bryant suggested that such examinations should be funded by charging the student. There is precedent for this in the examinations conducted by the Institute of Automotive Mechanical Engineers (IAME) and the Victorian Automobile Camber of Commerce (VACC). Miller thought that the industry would be prepared to pay.

d) General benefits to the automotive industry of the automotive mechanics NCC

A representative of employers said that the only benefit to employers was that a nationally consistent TAFE course in automotive mechanics would lead to portability of qualifications. He noted that an automotive mechanic who qualifies outside of South Australia can not advertise himself as a qualified tradesperson in that state, unless qualification is obtained under the tradesmens rights rules and this is not automatic. Miller (1987) commented that, as an employer, he could not be confident of the credentials of applicants for employment from interstate and that he usually employed such applicants on a trial basis.

Respondents to the questionnaire were asked to assess what they saw as the relative benefits to employers of a number of factors. The factors as rated, in order of perceived benefit, were:

- a form of training ensuring that the graduate is better prepared for adjusting to technological changes in the industry;
- more effective student/graduate terminal competencies to perform the current work tasks than those stemming from earlier courses;
- an improvement in the portability of relevant knowledge and skill across Australia. As indicated above this was part of the original justification for the project;
- a development of work attitudes leading to an improvement in job satisfaction;

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- a greater employee awareness of national standards; and
- the potential for better productivity. This hardly rated among respondents.

e) Effectiveness of feedback from industry to TAFE

Respondents were asked to rate the relative effectiveness of a number of channels of feedback from industry to TAFE. The factors as rated, in order of perceived effectiveness were:

- interchange of information between TAFE and industry within TAFE curriculum advisory committees;
- representation of state/territory industry training bodies (e.g. ICTC) on TAFE curriculum committees and *vice versa*;
- ongoing, informal interchange arising from TAFE teachers visiting industry and *vice versa*;
- social interaction between individuals from TAFE and industry;
- industry representation on TAFE college councils;
- official liaison programs such as TAFE teacher release to industry; and
- the operation of state/territory statutory regulatory authorities.

One respondent (B) who did not complete this part of the questionnaire commented that articles had been placed in industry journals but did not spark any interest from what he described as an industry with little concern for training. Although his TAFE authority had maintained close liaison with industry groups, he considered that the NCC had meant little to them.

Respondent G pointed to a difficulty arising from the differences of effectiveness of motor trade associations in the different states/territories. In some states/territories these associations are an integral part of the training decision-making process whereas in others they are much less involved and effective. Bryant (1987) had a different perspective. He considered that industry groups were`closer to their members than was TAFE and, yet, that their views were not necessarily sought. He pointed out that the automotive industry had set up skills training centres to meet the gap between TAFE provision and industry requirements.

f) Views of licensing and professional bodies of automotive mechanics NCC

In the automotive mechanics trade, the only state which requires licensing is New South Wales where tradespeople are licensed by the Motor Vehicle Repair Industry Council. This council accepts interstate qualifications. (Parkinson, 1987).

The professional association for automotive mechanics is the IAME, entry to which is by examination or by an equivalent qualification accepted by the Institute Council. The trade level certificate is not acceptable qualification for membership (Gray, 1987).

g) Summary of views of employers.

Generally, it was not considered that employers in the automotive industry were aware that their employees were being trained by an NCC based course. It was also considered that those who were aware that it existed would expect full implementation and consequent benefits. The most important of these benefits would be a form of training ensuring that the graduate has a better potential for adjusting to technological changes.

The general attitude of people in the automotive industry to the concept of the NCC was summed up in an article in the Motor Industry Journal. (M1J, 1983). The article commented that in the past an employer did not know, for example, whether training received in Queensland was applicable to a job in New South Wales. The writer put it thus:

> A potential employee's qualifications might be fine on paper. They were certainly genuine but did they add up to someone who could do the specific job in question?

What was needed was some kind of common language which means the same thing to everyone within the motor industry and TAFE appeared to have found the solution in an NCC embracing that industry.

This view was reinforced in the submission to the CPSG of a proposal for national post-trade automotive studies. The automotive industry offered to assist because it would foster national post-trade credentials (Irving, 1985). In fact the FCAI has recommended that national qualification standards should be established (Irving, 1986) (Cameron, 1987).

A.3.7 The role of the CPSG in the development and implementation of the automotive mechanics NCC

a) Extent of CPSG involvement

Respondents were asked whether the CPSG should be involved across the full spectrum of NCC activity (that is, planning, designing and development to implementation). Nine respondents replied and five were marginally in favour of complete involvement. Generally, it seemed that respondents considered the role of the CPSG to be policy guidance only rather than concern with the detail. This latter, it was believed,should be left to the task force. This interpretation raises the question of the relationship of the task force to the CPSG.

b) Involvement of CPSG in some form of monitoring of NCC implementation in all TAFE authorities

Of the eight respondents who answered the question, seven considered that the CPSG should be involved in sponsoring some form of national monitoring of implementation. One respondent (B) would restrict this monitoring to that of monitoring the national assessment criteria of terminal objectives, both theoretical and practical.

c) Criteria for selection of projects

In June 1984, the CPSG agreed on six criteria for the selection of projects (section 3.7.2). Respondents were provided with a list of these criteria and asked if they should be used as guidelines or considered as firm. Respondents were unanimous that they should be considered as guidelines only, since there will always be some desirable project which will not meet the criteria as set.

d) **Effect of CPSG on development and implementation of automotive mechanics NCC**

Respondents were asked to rate the relative importance of a number of possible effects that the CPSG had had on the development and implementation of the automotive mechanics NCC. The effects as rated, in order, were:

- the CPSG has provided an essential intermediary role between the task force and the ACTD;
- the CPSG has been responsible for the setting up of more relevant and effective task forces than those which may have emerged without the knowledge and experience of the CPSG;
- the CPSG may have hindered the task force in attempting to achieve goals which it considered to be advantageous to the NCC study area. In this case the CPSG did terminate the task force. before it had achieved all its aims (section A.2.17).

  Whether it hindered the achievement of aims or sensibly decided that the aims were too ambitious is another question which involves both the setting of task force aims and the relationship between the CPSG and the task force. These relationships were discussed in section 6.1.2.

A.3.8 The responses to the questionnaire

The outcomes of the interviews can be summed up in the following conclusions.

a) The fidelity of implementation of the automotive mechanics NCC as envisaged by the curriculum designers has been high in the various TAFE authorities.

b) Monitoring of both implementation and standards is favoured but there is little consensus on how, except to comment that with regard to standards it was considered that the CPSG should assume a role and that the monitoring should involve nationally determined assessment strategies.

c) The development of an NCC should be preceded by a nationally determined industrial/training needs analysis.

d) There was no agreement among those interviewed on the cost-effectiveness of the automotive mechanics NCC.

e) Both teachers and employers were seen as benefiting from the NCC. Teachers benefited from an enhanced image of TAFE and from staff development while employers benefited from a course which had potential for adjusting to technological change.

f) No nationally developed learning materials were in use and therefore a principal potential benefit to students of the NCC was not being realised.

g) Generally employers expected the NCC to be implemented in full.

h) The CPSG was seen as an intermediary between the task force and the ACTD but was not seen as making any large contribution to the quality of the curriculum products.

CASE STUDY B. THE SHEETMETAL NCC

As in case study A, those readers who wish only an overview of the outcomes of the case study are directed to sections B.3.17 and B.4.8.

B.1 Reason for selection

The sheetmetal NCC was chosen because its origins were different from those of the automotive mechanics NCC which was commissioned by the CPSG in what has become the customary fashion. In this case the origin of the project was in the initiative of a meeting of sheetmetal teachers in Melbourne in July 1981 (Schulze and Gilham, 1982a). The project was first listed by the CPSG at its inaugural meeting in February, 1982 (CPSG, 1982b).

B.2 Original definition of the project

At the inaugural meeting of sheetmetal teachers in Melbourne in July 1981 the convener of the meeting was requested to prepare discussion papers on the five areas of specialisation in sheetmetal, namely, stainless steel, ventilation, cabinet (cubicle), general manufacturer and aircraft.

At its November 1981 meeting, the ACTD recognised the need for a national common core syllabus for the training of sheetmetal trade apprentices and agreed in principle that a national working party in the sheetmetal trade be established, provided that it could be convinced that a national common core syllabus for sheetmetal was of sufficient priority (ACTD, 1981c).

The working party which became known as the national core curriculum task force was established and was required to complete its task within one year and to report to the ACTD at the end of 1982. The original task force contained eleven members of whom all but one was employed in TAFE. The other was a representative of the National Metal Industry Engineering Training Committee (NMIETC).

In April 1982, the task force set itself a number of tasks. From these developed the terms of reference (aims) of the project. These were set tentatively in July 1982 (Gilham,1982).

B.3 The aims of the sheetmetal NCP

There was an agreed rationale for a common core course in sheetmetal from which two general aims were developed.

The agreed rationale was to:

- ensure that the technical education of apprentices in the sheetmetal trade is maintained at a high level standard throughout Australia;
- provide industry with class sheetmetal tradespersons who can undertake the tasks and have job mobility in the areas of general manufacturer, ventilation, stainless steel and cubicles;
- provide each state with a common core of studies which will form the basis of course development within each state; and
- maintain the validity of sheetmetal technical education by the inclusion of studies related to technological change.

The general aims were:

- to provide apprentices within the sheetmetal trade with studies in drawing interpretation, pattern development and calculations, theory and fabrication methods and techniques in order that they may undertake the tasks required in the manufacture, repair and installation of sheetmetal jobs in the areas of general manufacture, ventilation, stainless steel and cubicles; and
- to provide industry with sheetmetal tradespersons who have the necessary skills, knowledge, safe practices and attitudes to maintain high standards, to promote the trade and to adapt to technological changes in the industry.

B.3.1 Develop an informed awareness of sheetmetal trade training throughout Australia

It does not seem that the task force developed any publicity material about the work it was doing.

B.3.2 Identify national needs related to sheetmetal trade training, prioritise needs and recommend appropriate courses of action

a) The stable elements of the sheetmetal trade

It was reported to the April 1982 meeting of the task force that four recent state college/industry surveys had been undertaken.

The task force representatives from New South Wales, South Australia and Western Australia were to forward the results of their surveys to the Queensland task force representative who was to co-ordinate the surveys and write an overview. The report was submitted to the September 1982 meeting (Schulze and Gilham, 1982b).

The report concluded that, in general, the sheetmetal trade was stable except in the sheetmetal aircraft industry which was in a state of flux. It also concluded that new technologies were changing skills requirements in several general areas of sheetmetal.

It was recommended that, when the NCC in sheetmetal was introduced and implemented, a national survey should be conducted to ensure that the syllabus adequately covered the requirements of Australian industry. The task force recommended to the CPSG that $1 600 be allocated for this purpose in 1983. (Schulze, 1982). The CPSG deferred this activity until 1984 (CPSG, 1982d).

b) Aircraft sheetmetal

The task force further agreed to recommend to the CPSG that a task analysis of aircraft sheetmetal be undertaken in 1983 (Schulze and Gilham, 1982b). Aircraft sheetmetal had been identified as an important element of the transport industry. However, it was generally agreed that training for it had been unsatisfactory. In particular, there were needs to keep abreast of rapid technological changes and to update facilities. A proposal that part of the $14 500 recommended for the development of a national syllabus for aircraft sheetmetal be allocated to a task analysis was submitted to the CPSG in October 1982 (Schulze, 1982). This proposal was not accepted by the CPSG and hence was temporarily dropped by the task force (Schulze and Gilham, 1982c)

B.3.3 Oversee trends and developments taking place within the sheetmetal trade

No specific action on this aim seems to have been undertaken by the task force. To some extent this aim is subsumed in the previous one.

B.3.4 Investigate, assess and develop an NCC for the sheetmetal trade

In April 1982 the convener of the first meeting reported that his first initiative had been to produce a proposal for the minimum acceptance level of skill for the stainless steel component of the course (Schulze and Gilham, 1982a). He commented that the paper had been well received and subjected to minimal changes and recommendations. He also reported that the ventilation and cabinet discussion papers had been completed and that that in general manufacture would be ready by mid-June 1982.

In the event, the sheetmetal NCC in the four areas was accepted in principle by the task force at its November 1982 meeting (Schulze and Gilham, 1982c). Some suggested changes were to be made and the revised copies circulated. The CPSG was informed at its December 1982 meeting that the core document had been approved by the task force and endorsed by the national council of the Metal Trades Industry Association (Mayne, 1982). The CPSG decided to discuss the curriculum document at its February 1983 meeting (CPSG, 1982c).

The document as submitted to the CPSG (TAFE Board, 1982) contained (inter alia) the following recommendations

a) There be an Australian national core curriculum for sheetmetal trade training plus state/territory local content.

b) The Australian national core curriculum - sheetmetal document be introduced in all states by February, 1984. (Regardless of this recommendation, it was noted that the NCC, even when finally accepted, would not be implemented automatically by each state/territory, Schulze and Gilham, 1982c).

c) **There be a review of the Australian national core curriculum for sheetmetal in 1985 by the NCC task force.**

The February 1983 meeting of the CPSG accepted these recommendations and proposed their approval by the ACTD (CPSG, 1983b). As the CPSG decided to terminate the project at the end of 1983 (CPSG, 1983a), the review was never undertaken.

In September 1984 Schulze (1984b) reported that as a result of the preparation of the sheetmetal NCC, all states/territories had amended or were rewriting their own syllabus to confirm with the NCC.

As indicated above (section B.3.2) aircraft sheetmetal had been identified as requiring urgent attention and a recommendation had been made for a task analysis in that element of the trade. In October 1982 it was recommended to the CPSG that the task force, on the basis of the task analysis, prepare and implement a draft national syllabus. A total allocation of $14 500 was proposed for this task. As with the recommendation for a task analysis, this proposal was not accepted by the CPSG.

The issue was raised again almost immediately. Schulze and Gilham (1983a) reported that a preliminary investigation into the needs of the aircraft trades (including aircraft sheetmetal) had been completed in Victoria. From this investigation it had been verified that there was a serious training problem in the aircraft industry. The task force recommended to the CPSG that it should monitor the working party set up to develop an aircraft sheetmetal program resulting from the aircraft trades investigation (Schulze, 1983a). The CPSG would not accept a monitoring role for the task force. Rather, it decided that the task force should liaise with the working party (CPSG, 1983c).

B.3.5 Co-ordinate the development/exchange of teaching-learning resource materials

A format on reporting teaching-learning resource materials was to be adopted and this format was to be sent to each state/territory so that information could be provided. The format was to be developed by November 1982 and the activity was seen as ongoing. In July 1982 it was reported that South Australia had been prepared a request for TAFEC funds for materials development (Mathers, 1982b). This request was opposed by the task force which informed the CPSG that it had not given South Australian TAFE permission to develop national learning materials and that it considered that only its own initiatives should be supported financially (Gilham and Schulze, 1982b).

At the the September 1982 meeting of the task force a comprehensive list of the resources available in each state/territory was tabled. It was noted that further research was necessary to ascertain the quality of the resources available and the degree of duplication. Schilling (1982) indicated that it was planned to ascertain what existing resources needed to be modified and/or what new resources were required.

Schulze (1982) noted that no learning resource materials on sheetmetal which were concise enough to meet the learning needs of the course had been produced in Australia. Most sheet metal literature was imported and had little relevance to Australian sheetmetal courses.

As part of a project to identify the additional resource material required for effective implementation of the NCC (section B.3.6), it was recommended that the CPSG allocate $90 200 for the purpose of developing a methodology for the production of necessary resource materials. This methodology was to include the identification of the people required. This recommendation was not accepted by the CPSG.

At the November 1982 meeting of the task force it was decided that Tasmanian TAFE should produce a document of all state/territory resources so that the shortfalls could be identified (Schulze and Gilham, 1982c). Later in April 1983 it was decided that a working party appointed by the task force and called the National Student Learning Material Working Party should visit each state/territory so as to investigate and provide assistance in the development of teaching and learning resources. Part of its work was to gather and catalogue the teaching learning resources available throughout Australia (Schulze, 1983a) and to recommend on the development of multi-media teaching-learning materials (Schulze, 1983b).

The working party presented its first interim report to the August 1983 meeting of the task force (Schulze and Gilham, 1983b) and reported that there was a drastic shortage of relevant teaching resources in Australia.

The task force approved the following actions:

- each state/territory to identify the curriculum area relevant to each of its own resource packages;
- the working party to classify the material into common core topic areas;
- the working party to identify areas within the curriculum where no suitable resources were available; and
- the working party to establish mechanisms for the ongoing development of new aids and resources to meet the identified needs.

In its application for 1984 funding the task force sought an allocation of $1 000 so that the working party could complete sufficient research to recommend to the CPSG further development of resources in sheetmetal which could be used by both students in the classroom and external students (Schulze, 1983d). This recommendation was not accepted, as the CPSG decided that no national funds should be made available for the sheetmetal NCC in 1984 (CPSG, 1983a). Schulze (1983d) indicated that the development would continue on this project using state funds, but in February 1984 (Schulze, 1984) he stated to the CPSG that the project was in jeopardy because of lack of support. Such materials he said, were necessary for the successful implementation of the curriculum.

Schulze et al (1984) recommended to the Victorian representative on the CPSG that the National Student Learning Material Working Party be re-established in order to co-ordinate the future development of materials to meet the needs of all states/territories. An allocation of $1000 was sought for 1984-85 and this was approved by the CPSG (1984b).

In his report to the September 1984 meeting of the CPSG, Schulze (1984b) did not indicate the way in which the $1 000 approved at the June 1984 meeting of the CPSG would be spent. He recommended that multi-media production centre at Richmond

College of TAFE in Victoria be considered by the CPSG as a suitable venue for national co-operation in the production and reproduction of teaching learning materials for NCC sheetmetal and requested $870 for a further meeting of the working party in order to discuss:

- the acceptance of a national co-operative production centre;
- the establishment of a list of teaching learning materials which need to be developed and the media in which they should be produced;
- the distribution of workloads to states/territories;
- an agreement upon national storage of teaching learning material masters; and
- the mechanics of production.

This recommendation was reiterated by Rolf (1984) who put it to the CPSG as a new program. He said that the former task force had indicated an urgent need for support materials and suggested that this need could be substantiated by the number of self-paced learning packages being developed in Victoria and sold interstate. He recommended an allocation of $1 180 for 1985 (a little more than the sum recommended by Schulze (1984b)). The CPSG approved an allocation of $1 000 so that representatives of the task force could meet with representatives of the DEIR to discuss the development of teaching-learning resources. This discussion was to include the topic of trade reference manuals (section 5.3.15) (CPSG, 1984d).

The CPSG also requested the interim report of the National Student Learning Materials Working Party should be forwarded to it. There is no record of this request being followed up by the CPSG.

B.3.6 Evaluate and improve the quality of sheetmetal trade training programs and associated resource materials

A paper on student assessment was presented to the task force in July 1982. At that same meeting it was agreed that evaluation studies should be conducted into:

- the identification of needs;
- the quality of learning materials and teaching methodologies used both nationally and overseas; and
- possible new developments in
  - teaching and learning resources
  - teaching and learning strategies
  - assessment strategies
  - staff development
  - curriculum support services.

From the above it was intended to develop a reference catalogue which could be used in the development and future implementation of the sheetmetal NCC.

a) Monitoring of standards by using student assessment practices

In a paper presented to the task force at the September 1982 meeting, Soo (1982) stated that, to have credibility, an NCC needed to include a national student assessment strategy for the purposes of maintaining standards and of providing an assurance to industry that parity of standards existed in the educational programs of the various states/territories. Among suggestions which had been made were the establishment of a sheetmetal national moderating panel and the development of an item bank of test items.

Soo recommended that a special committee be set up to investigate student assessment practices and that the committee should include representatives from the various national industry associations. Schilling (1982) noted that the investigation of student assessment practices was planned for 1983. However, the November 1982 meeting of the task force decided that student assessment was a state/territory not a national responsibility (Schulze and Gilham, 1982c).

b) Monitoring of standards by quality control:

Schulze (1982) put forward two proposals for quality control:

- NCC endorsement of state proficiency certificates; and
- a national award for the outstanding apprentice in each state/territory.

Part of a suggested allocation of $1 800 was recommended to study these issues (section B.3.12) and was approved both by the CPSG (CPSG, 1982d) and the ACTD (Schulze and Gilham, 1982c).

The task force recommended that the ACTD support the monitoring of quality control by agreeing to:

- an analysis of quality control issues;
- the preparation of a recommendation for NCC endorsement in proficiency certificates; and
- the involvement of industry in a sheetmetal merit award scheme.

The CPSG accepted the first two of these recommendations and referred them to the ACTD for approval. The third was noted, but was not considered a curriculum issue (CPSG, 1983b).

The issue of quality control was addressed by the task force again in April 1983 (Schulze and Gilham, 1983b). It decided to set up a national student assessment working party to investigate and provide assistance in the maintenance of quality of NCC. A draft was presented to the task force in August 1983 and was adopted in principle (Schulze and Gilham, 1983b), with a view to being implemented in March 1984 (Schulze, 1983d). However, the CPSG terminated the project at the end of 1983 (CPSG, 1983a).

Schulze et al (1984) stated that, at the time the project was terminated, the national student assessment working party had been at that time refining its first submission to the task force and recommended to the Victorian representative on the CPSG that the working party be re-established in order that further work might be done. Schulze (1983c) had earlier indicated that this project might continue using state funds but this had not occurred. Rolf (1984) saw the maintenance of national standards as one of the functions of the proposed national monitoring panel (section B.3.12).

In June 1985 the task force put a proposal to the CPSG that $9 150 be allocated (inter alia) to the task force so that it might act as standards review panel in order to ensure that the contents of any reference manual suit each Australian state (see section B.3.15). The proposal was not supported (CPSG, 1985a).

e) Evaluate all existing resource material

It was proposed that the task force would arrange for the evaluation of all existing curriculum resource material and identify the resources needed for effective implementation of the sheetmetal NCC (Schulze, 1982). This was part of a proposal for the evaluation of existing material and the production of new material for which an allocation of $90 200 was sought (see section B.3.5).

The CPSG considered that the proposed amount of $90 200 was excessive and recommended an allocation of $12 500 (CPSG, 1982d). Gilham (1987) confirmed that the money was never actually made available.

It was proposed to the task force that any evaluation of resources required:

- a knowledge of all resources available to all teachers throughout Australia in relation to the common core; and

- a consensus on assessment as the resources selected will depend on the form of assessment used.

Such an evaluation would require a sub-committee to decide those resources which are appropriate, accurate and up-to-date and those which need to be discarded.

A working party was established to compile the information needed to meet the first requirement of the evaluation (Schulze and Gilham, 1983a). There is no documentation of the working party having reported to the task force.

B.3.7 Investigate and make recommendations on the type and size of major teaching equipment.

Major teaching equipment was defined as costing more than $500. The convener was to collect all the available information and to compile recommendations. The deadline for this activity was November 1982. These recommendations were accepted at the September 1982 meeting and it was decided to append them to the NCC document to be presented to the CPSG (Schulze and Gilham 1982b).

B.3.8 Improve and facilitate the professional development and/or exchange of sheetmetal teachers in Australia

The methods of encouraging sheetmetal teachers to move between TAFE authorities were to be investigated and a report presented to the July 1982 task force meeting.

The conditions under which exchanges took place between the authorities of sheetmetal teachers were identified at the September 1982 meeting, but no recommendations followed (Schulze and Gilham, 1982b).

The issue of professional development was considered again at the July 1982 meeting of the task force (Gilham, 1982) where it was suggested that each state/territory should arrange its in-service courses in a single college so that all teachers would be aware of the NCC and be encouraged to follow it as closely as possible. The need for fidelity in implementation was emphasised since it was claimed that the key to successful implementation was a uniform approach to core content and standard.

It was proposed that each state/territory representative on the task force should be given the authority to organise in-service conferences for sheetmetal teachers and so ensure that they all actually follow the NCC.

At the September 1982 meeting of the task force a paper (Tomkinson, 1982) on the professional development of sheetmetal teachers was presented. It foreshadowed the need for professional development in new technology associated with sheetmetal, new methods of instruction and teaching strategies.

The task force decided that this topic was to be an ongoing activity of the task force as further professional development became necessary for the successful implementation of the NCC.

Schilling (1982) recommended as issues which should be considered in 1983 an examination of staff development activities, including possible teacher exchange programs across TAFE institutions and visits by teachers to industry.

Schulze (1982) stated that few sheetmetal teachers in Australia were experts in all aspects of the sheetmetal industry and that they tended to remain in one area of specialisation. He observed that the introduction of the sheetmetal NCC will require teachers to broaden their competence in all aspects of the industry.

In October 1982, the sheetmetal task force recommended to the CPSG that $2 200 be allocated so that a working team could:

- identify sheetmetal teacher skill deficiencies;
- plan a workable strategy for upgrading teacher skills; and
- provide all states with an ongoing training formula.

The CPSG did not approve funds for this activity as it considered that staff development could be funded from other sources (CPSG, 1982d).

Another aspect of staff development considered by the task force was that of its own members. It was noted that the CPSG, at its June 1983 meeting, had decided to hold its task force meetings in the convening state (CPSG, 1983c). The sheetmetal task force suggested that such a restriction gave concern for the future and quality of NCC (Schulze, 1983c). It was stated that the high degree of success of the sheetmetal task force was related to its ability to visit a number of states. In this way it was able to observe differences in structure, function and technology between industry and TAFE institutions across the states. It was claimed that these experiences had allowed members of the task force to make better judgements. It was recommended to the CPSG that the task force be able to meet as planned. This recommendation was not accepted by the CPSG which decided that the project should terminate at the end of 1983 (CPSG, 1983).

B.3.9 Undertake research into issues of national concern to sheetmetal trade teachers

It would seem the task force neither undertook research on this topic nor commissioned any.

B.3.10 Liaise with Australian and overseas researchers, educators and organisations concerned with sheetmetal trade training

The only documented liaison between the task force and an outside organisation was with the NMEITC.

B.3.11 Liaise with industry on a national basis

The July 1982 meeting noted three areas where increased liaison was possible.

i) Greater access by TAFE to results of research in appropriate programs was suggested. Bodies with which greater co-operation should be sought included the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Technology Transfer Council.

ii) There was the possibility that projects which would improve the productivity of firms could be carried out by sheetmetal students and staff in conjunction with the Productivity Promotion Council and industrial training authorities.

iii) TAFE staff might be given right of private practice so that they might assist industry with developmental projects.

It was agreed that members of the task force take up the matter of more active industry liaison with their respective TAFE authorities.

Little was done about this until August 1983 when the task force recommended that $1 000 be allocated to meet the cost of travel and accommodation for the task force industrial member (Schulze, 1983d). This recommendation was not accepted as the CPSG decided that the project should terminate at the end of 1983 (CPSG, 1983a).

B.3.12 Co-ordinate and monitor the implementation of sheetmetal NCC in the various TAFE authorities

This aim was never specifically stated, but grew out of the decision to develop the NCC. At the September 1982 meeting of the task force, it was decided that each TAFE authority should prepare a paper outlining its implementation procedures and any associated problems (Schulze and Gilham, 1982b). In October 1982, Schilling (1982) reported that at least 90% of the common course content was contained in the syllabus of each TAFE authority.

Also in October 1982, a submission that the task force should co-ordinate the implementation of the NCC was made to the CPSG. An allocation of $4 000 was sought for this purpose. In addition, part of a proposed allocation of $1 800 was to be used to develop a system to monitor the implementation of the NCC (Schulze, 1982) (section B.3.6(b)). These proposals were approved by the CPSG (CPSG, 1982d) and subsequently by the ACTD (Schulze and Gilham, 1982c).

It should be noted that acceptance of a national core document by any body (including the ACTD) does not ensure implementation in all states/territories. In an attempt to facilitate successful implementation of the sheetmetal NCC, the task force adopted the following resolution at its November, 1982 meeting.

> Members of the Sheetmetal N.C.C.T.F. express concern that no known policy exists from TAFE directors, COSAC, State Industrial Training Commissions, employer and union bodies regarding the acceptance in principle for common core curricula. The members of this Task Force believe that such 'acceptance in principle' would facilitate the development of and later recognition of the syllabus document and legitimise the activities of the task force. It therefore recommends that the Curriculum Projects Steering Group requests the National Council of the TAFE Directors to seek support in principle for common core curricula from:
>
> at a National level
>
> - Conference of TAFE Directors;
> - the National Training Council and its infrastructure of National Industry Training Committees;
> - Australian Council of Trade Unions;
> - Confederation of Australian Industry; and
> - COSAC
>
> at a State level
>
> - Industrial Training Commissions;
> - Trades Hall Councils (or equivalent);
> - major employer bodies such as Chamber of Commerce, Chamber of Manufacturers, Master Builders Association, Automobile Chamber of Commerce, Metal Trades Industry Association, etc.
>
> (Schulze and Gilham, 1982c, p9).

The resolution was to be forwarded to the CPSG, but there is documentation of it being considered.

In April 1983 the task force decided to form a national core curriculum monitoring working party to consult with each state/territory and to advise on the implementation of the NCC curriculum. The working party was to consist of:

- an elected member of the task force
- the state/territory representative of the task force; and
- two representatives from industry from within the state/territory.

Each state/territory was to be visited by the working party once each year so that the working party could monitor the introduction of the NCC and investigate and provide assistance in the development of instructional modes and strategies. This decision was to be forwarded to the ACTD for approval (Schulze and Gilham, 1983a).

Although the CPSG had at first allocated money towards the development of a system to monitor the implementation of the NCC, it later developed reservations. It questioned whether the decision to monitor the introduction of the NCC was within the terms of reference of the task force. It particularly questioned whether the task force should be monitoring anything at all (CPSG, 1983c).

This change of attitude by the CPSG seems not to have been appreciated by the task force. Proceeding as if the CPSG had expressed no reservations at all Schulze and Gilham (1983b) seemed to assume that the working party would proceed and therefore that the task force would need to formulate guidelines for it. They argued that the taskforce should forward a submission to the CPSG for the development of a strategy plan for the establishment of what they called a task force monitoring group. In the progress report to the CPSG in August 1983, this monitoring group was described as a national core curriculum monitoring unit (Schulze, 1983c).

In its application to the CPSG for 1984 funding, the task force sought no funds for the development of a strategy plan. Rather, it recommended that the CPSG approve that the national core curriculum monitoring unit commence operation in 1984 and that $2 510 be allocated for the operation of the unit which was seen as on-going to at least 1985-86 (Schulze, 1983c, 1983d). This recommendation was not accepted by the CPSG which decided that the project should terminate at the end of 1983. However Victoria was to adopt a monitoring role (CPSG, 1983a). This latter decision was used as justification for continuing pressure on the CPSG to reconsider the issue of monitoring.

In February 1984, the convener of the task force sought clarification from the CPSG on what the latter meant by a monitoring role (Schulze, 1984a). He pointed out that in a sheetmetal NCC task force development plan submitted in November 1982 (Schulze and Gilham, 1982c) and to which the task force had been working, there was an implementation phase which included the establishment of a task force monitoring group. He sought guidance on whether the monitoring mode as envisaged by the CPSG was the same as the implementation phase in the strategy plan.

The CPSG did not answer the question. Rather it decided to consider issues on monitoring at its June 1984 meeting (CPSG, 1984a). The outcomes of these discussions are reported in sections 4.2.4 and 4.3.1.

In April 1984, Schulze et al (1984) indicated that the working party working in conjunction with an industry consultant had produced a strategy for monitoring which was ready for immediate implementation. They recommended that the Victorian representative on the CPSG seek approval at the May meeting of the CPSG for the implementation of the strategy. An allocation of $5 120 was sought for 1984-85. In May 1984 the NMEITC supported the recommendation. It stated that it found it puzzling that the task force could not monitor the introduction of the common core throughout Australia (Meyer, 1984). Regardless of these pressures the CPSG rejected the recommendation (CPSG, 1984b).

Later that same year, Schulze (1984b) reported that the exercise in monitoring the first year of implementation of the sheetmetal NCC had been totally unsatisfactory. He asserted that a planned monitoring strategy involving TAFE administrators and teachers, together with industry should be considered by the CPSG if it genuinely wished for NCC to be recognised as a valuable contribution towards unifying overall training standards. He recommended again the sheetmetal strategy plan for monitoring the implementation of the sheetmetal NCC and recommended an allocation of $3 550 for this purpose in 1985.

Rolf (1984) reinforced this recommendation but submitted it as new program. He noted that Victorian TAFE had a monitoring scheme not dissimilar to that envisaged by the task force and that its experience could be used as a trial for all of Australia. He cited the apprentice authority, the Victorian Chamber of Manufactures and the NMEITC as supporting the monitoring scheme. The monitoring panel was to consist of two representatives from the local sheetmetal industry, a TAFE sheetmetal representative from the home state/territory and the national convener for sheetmetal. A full national report was to be submitted to the September 1985 CPSG meeting. The CPSG did not support the recommendation as it was not consistent with its policy on monitoring (CPSG, 1984d).

In September 1986 another attempt was made to initiate an evaluation of the implementation of the sheetmetal NCC. It was proposed that $8 200 be allocated for this evaluation in 1987 (Gill, 1986). The CPSG did not support the proposal (CPSG, 1986e).

B.3.13 Investigate the feasibility of national pre-apprentice and pre-vocational courses in sheetmetal

Schulze (1982) indicated that the task force considered that such courses would be desirable to enhance the job opportunities of students contemplating a career in the metal trades. An allocation of $2 000 was proposed for this purpose. This allocation was not approved and it was decided at the November 1982 meeting of the task force that each state/territory should continue to develop courses to meet its own needs (Schulze and Gilham, 1982c).

B.3.14 Develop commonness in trade terminology

This concept was floated as a project for the task force in 1983, but no action was taken.

B.3.15 Develop a set of sheetmetal trade reference manuals

The task force proposed that during 1983 a working party draw up a strategy for the development of the first set of Australian produced sheetmetal trade reference manuals. No expenditure was proposed for this undertaking (Schulze, 1983a).

The working party which was called the Australian sheetmetal trade reference manual working party, circulated to all states/territories a paper setting out the proposed scope for the manual and method for the production of the manuscript. Reactions were sought to the paper. The general recommendation was that a reference book sufficiently detailed in all the relevant processes of the sheetmetal industry as to make it useful to apprentices, journeymen and all other people associated with the industry should be produced (Schulze and Gilham, 1983b).

In its application for 1984 funding, the task force requested $3 000 to produce one unit out of the proposed 17 as a pilot for approval of format and standard. The whole project was estimated as taking between two and three years (Schulze, 1983d). This application was refused as the CPSG decided that the project should terminate at the end of 1983 (CPSG, 1983a). At that stage the working party had completed the initial work and had allocated some topics to each state (Schulze et al, 1984). Schulze (1983e) indicated that he expected the development of the trade manuals to continue using state funds.

It appeared that these expectations were not realised as, in April 1984, Schulze et al (1984) recommended to the Victorian representative on the CPSG that the Australian sheetmetal trade reference manual working party be re-established in order to co-ordinate the development and production of the sheetmetal trade reference manuals. An allocation of $1 000 was sought for 1984-85. The CPSG did not approve this allocation but asked the task force to investigate the possibility of developing the sheetmetal trade reference manuals in co-operation with the DEIR.

The task force returned to the CPSG in September 1984 again seeking support for the production of reference manuals. Schulze (1984b) recommended an allocation of $870 in 1985 so that the Australian sheetmetal trade reference manual working party could meet. The CPSG sought a more detailed proposal (CPSG, 1984c).

This was submitted as a new program to the December 1984 meeting by Rolf (1984). He commented that the former task force for the sheetmetal NCC had been unanimous in its support for a much needed and overdue manual. He emphasised the necessity, basing his case, on ten years as an industrial training advisor working with industry, TAFE and the Industrial Training Commission. He indicated that the NMEITC was prepared to include a teacher salary for this purpose in its 1985-86 planning. After a teacher was released to prepare materials, approximately two years was envisaged.

The estimated cost of the project was of the order of $60 000 plus the costs of photographs and artwork. The CPSG did not accept Rolf's proposal but did suggest that representatives of the task force might meet with representatives of the DEIR to discuss the development of a set of sheetmetal trade reference manuals and allocated $1 000 for that purpose (section B.3.5).

It also agreed that its chairman should approach DEIR regarding the possibility of it updating its manual (CPSG, 1984d). In March 1985 the chairman wrote to DEIR suggesting that officers of that department might meet with the task force in order to discuss the possible co-operative development of resources in the sheetmetal area. (Fricker, 1985). This meeting appears never to have eventuated.

In June 1985 the task force approached the CPSG with a proposal that $9 150 be allocated to it for (inter alia) the development of a reference manual in conjunction with the DEIR (Schulze 1985a) (see section B.3.6(b)). It was indicated that all states/territories supported the proposition as long as it was of no cost to them. The proposal was not supported as it was understood that the DEIR was working on producing a manual independent of the CPSG.

Enquiries made to the Australian Government Publishing Service have revealed that, as yet, no basic training manuals in sheetmetal have been printed. Two are in production and seven are in the development stage. Obviously the development of these involving direct negotiation between TAFE teachers and DEIR has proceeded without discussion with the task force or CPSG.

B.3.16 Evaluation of sheetmetal NCC

The working party appointed by the task force in April 1983 (Schulze and Gilham 1983a) was to have the responsibility of investigating and providing assistance on this question. What was to be evaluated was not specified in the decision.

One possibility was monitoring of the relevance of NCC courses. The working party was to investigate and provide assistance in monitoring technological change. The CPSG questioned whether this activity was within the terms of reference of the task force (CPSG, 1983c). However, the NMEITC commented that it found it difficult to understand why the task force would not have the ongoing responsibility for the review and evaluation of the curriculum in order to ensure its continuing improvement and relevance. Rolf (1984) proposed that the establishment of a national monitoring panel would be able to comment on the technical relevance of the course.

B.3.17 A summary of the achievements

The task force set for itself a total of 19 aims of which only one was clearly achieved. That was to investigate and make recommendations on the type and size of major teaching equipment.

A second aim, namely to investigate, assess and develop an NCC for the sheetmetal trade, was achieved for the four areas of ventilation, cabinet, stainless steel and general manufacture. The development of an NCC for aircraft sheetmetal was not achieved.

Of the others:

a) five were never really addressed. They were:

i) develop an informed awareness of sheetmetal trade training throughout Australia;

ii) oversee trends and developments taking place within the sheetmetal trade;

iii) undertake research into issues of national concern to sheetmetal trade teachers;

iv) liaise with Australian and overseas researchers, educators and organisations concerned with sheetmetal trade training; and

v) develop commonness in trade terminology.

b) Seven were terminated by the task force itself, or by the CPSG - in the case of the latter, even after some funds had been allocated towards their achievement.

i) Monitoring of standards by using student assessment practices

This was terminated by the task force when it decided that student assessment was a state/territory, not national, responsibility.

ii) Monitoring of standards by quality control

There was an original allocation of $1 800 to achieve this aim and a draft report was presented to the task force in August 1983 with a view to implementation in March 1984. The CPSG terminated the project at the end of 1983.

iii) Improve and facilitate the professional development and/or exchange of sheetmetal teachers in Australia

The CPSG did not approve funds for this activity as it considered that staff development could be funded from other sources. Whether this eventuated is discussed in the analysis of responses to the questionnaire.

iv) Liaise with industry on a national basis

Formal liaison was terminated by the CPSG at the end of 1983. The effectiveness of any informal liaison is discussed in the analysis of the responses to the questionnaire.

v) Co-ordinate and monitor the implementation of sheetmetal NCC in the various TAFE authorities

The task force was persistent in its requests for approval to follow this aim through; the CPSG, after changing policy in 1983, was equally consistent in refusing.

vi) Investigate the feasibility of national pre-apprentice and pre-vocational courses in sheetmetal

The CPSG refused to allocate funds for this purpose.

vii) Evaluation of the sheetmetal NCC

What was meant by this aim was never really determined. The CPSG did not see this activity as being within the terms of reference of the task force.

c) Five had the approval of the CPSG but did not seem to be brought to a successful conclusion. It might be said that they are in some ways still current although nothing has been reported since November 1985.

i) Identify national needs related to the stable elements of the sheetmetal trade, prioritise needs and recommend appropriate courses of action.

By the stable elements are meant ventilation, cabinet, stainless steel and general manufacture.

A preliminary overview of these elements of the sheetmetal trade was submitted to the task force in September 1982. The task force recommended to the CPSG that, when the NCC in sheetmetal was introduced and implemented, a national survey should be conducted to ensure that the syllabus adequately covered the requirements of Australian industry. The CPSG deferred this activity until 1984 and it appears that it has never been taken up.

ii) Identify national needs related to aircraft sheetmetal and recommend appropriate courses of action

As a result of an investigation into the needs of the aircraft trades, a working party was set up to develop aircraft sheetmetal. The CPSG decided that the task force should liaise with that working party. There appears to be no evidence of any outcome from this working party.

iii) Co-ordinate the development/exchange of teaching-learning resource materials

In June 1984 the CPSG approved an allocation for 1984-85 of $1 000 for the co-ordination of the development of materials to meet the needs of all states/territories. In December 1984 another $1 000 was approved by the CPSG so that representatives of the task force could meet with the DEIR to discuss the development of teaching- learning resources. It seems that nothing has resulted from the allocation of these funds.

iv) Evaluate all existing resource materials

In October 1982, the CPSG recommended $12 500 for this evaluation but the allocation was never approved. A working party was established to compile details of all resources available to all teachers throughout Australia in relation to the common core. There is no evidence of the working party having reported.

v) Develop a set of sheetmetal trade reference manuals

This aim was related to co-ordinating the development of teaching-learning resource materials and the joint activities were allocated $1 000 by the CPSG so that discussions might be held with the DEIR. It is understood that no discussions have been held, apparentely because DEIR decided to produce the manuals independently of CPSG or the task force.

d) Overall the CPSG had recommended $20 300 for this NCC of which $7 800 was allocated. In fact $93 365 was spent (section B.4.4). For this sum, an NCC in the four conventional areas of sheetmetal together with an inventory of major equipment have been produced.

B.4 Consulting the TAFE officers who were involved with the development and/or implementation of the sheetmetal NCC

Of the twelve questionnaires distributed, all were returned and content analysed. In addition, respondents from New South Wales and Victoria were interviewed. The two returns from TAFE authority G were identical. As with the automotive mechanics questionnaire, the respondents from different states/territories are identified by letter.

B.4.1 The range of management approaches to NCC development

a) The national task force approach

To the question on the effectiveness of the national task force approach compared with the local development of a sheetmetal curriculum, six respondents considered that the national task force approach was more effective, two that it was marginally more effective and four considered that the approach would lead to curriculum products of about the same quality as the normal state/territory curriculum development methods.

b) Some options to the task force approach

i) Co-operative project method (Option A, Question 2, Apendix C).

The majority of respondents considered that this method would not be as effective in developing an NCC as the traditional national task force model. Only three (C,D and F) even considered that the method was worth considering.

ii) Delegation to a TAFE authority (Alternative approach B, Question 2, Appendix C).

The representative of one TAFE authority (B) did not answer this question. Opinion among the rest of the respondents was nearly equally divided between those who thought delegation to a TAFE authority would not be as effective as the traditional national task force model and those who thought that such delegation was worthy of consideration.

iii) Use of a project officer (Alternative approach C, Question 2, Appendix C).

Again the representative of TAFE authority B did not answer this question. Also again, the other respondents were almost equally divided between those who considered that using a project officer would not be as effective as the traditional national task force model and those who thought that such a model was worthy of consideration.

c) The preferred option

The TAFE officers involved with the development and/or implementation of the sheetmetal NCC strongly considered that the national task force method was the most effective approach to the management of NCC development. If necessary, they would consider delegation to a TAFE authority or use of a project officer.

d) The technique of curriculum development

As indicated in Sections 4.1.7 and B.3.4, the production of the original syllabuses was based on the courses provided in each state and territory. It was recommended (Schulze and Gilham, 1982b) that, when the NCC in sheetmetal was introduced and implemented, a national survey should be conducted to ensure the syllabuses adequately covered the requirement of Australian industry. That is, the technique of curriculum development used was the preliminary investigation method.

B.4.2 The extent of implementation of the sheetmetal NCC on all states/territories

a) The fidelity of users in conforming to the pre-specified goals of the curriculum developers.

In the case of the sheetmetal NCC, the task force consisted of twelve members, six of whom were practising teachers (Schulze and Gilham 1982c). The research, development and diffusion model of curriculum design had been used and clearly there would have been difficulties for teachers in the classroom having a sense of ownership of curriculum thus leading to problems with fidelity of implementation.

i) Extent of implementation of syllabus content.

One respondent (B) stated that the sheetmetal NCC had been totally implemented in his authority while ten others said that more than 75% had been implemented. One (E) stated that only delay in the supply of capital equipment had prevented 100% implementation. One respondent (H) stated that the NCC had not been implemented at all in that authority.

ii) Degree of change in form and substance of NCC in the transition to the TAFE authority program.

One respondent (H) stated that there had been no change in the form and substance of the NCC in the transition from the NCC syllabus to the TAFE authority program. Yet this respondent stated that the NCC syllabus had not been implemented at all in that authority.

The reason for this apparent contradiction was explained by the respondent as follows. He commented that the sheetmetal NCC was a "cut and stick" of whatever was common to the syllabuses of all TAFE authorities (what has been called here the preliminary investigation technique). He argued that, as the techniques of the sheetmetal trade were common across Australia, the question of the implementation of a new syllabus did not arise as the syllabus as prepared and taught by that TAFE authority was indistinguishable from the NCC syllabus.

The respondent went further. He asserted that any NCC exercise in any of the established trades was a complete waste of taxpayers' money. In sheetmetal, the trade is common across the nation and as all TAFE authorities are guided by advisory committees the ideas of which do not vary between states and all of which are sensitive to changes in the vocations, the syllabuses independently developed by the TAFE authorities will be virtually common. He advocated that only those vocations which are not common across Australia or which have not yet had syllabuses developed should be considered for NCC. He cited plastics as an example where an NCC development could be justified.

Three respondents indicated minimal change and the rest moderate changes in form and substance in the transition from the NCC syllabus to the TAFE authority program. In two TAFE authorities (D and G) the change was merely an extension of the time required for presentation.

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iii) Constraints on TAFE authorities causing change in the form and substance of NCC syllabus content products.

It was generally agreed that:

- lack of major equipment such as special machines;
- lack of capital resources with which to upgrade buildings; and (to a lesser extent)
- lack of adequate texts

were the principal constraints on TAFE authorities which caused changes in the form and substance of NCC syllabus content products.

It was also generally agreed that there was no:

- uniqueness of state/territory training needs;
- specialised features within the industries which the sheetmetal occupation serves

which would cause any changes to the course.

This really is a restatement of the views of respondent H. He considered that the sheetmetal trade was so uniform across Australia that the whole exercise was a waste of time.

iv) Proportion of NCC syllabus in TAFE authority programs.

This question is a little different from that in B.4.2(a)(i). Here information on the extent to which the NCC syllabus formed part of the TAFE authority program was sought.

In four authorities the NCC syllabus was the TAFE authority program. For all but two others (F and H), it was over 60%. The response from H was not consistent with a previous view that the NCC syllabus would, of necessity be the same as the authority syllabus in a trade where techniques across Australia were uniform.

b) Course presentation mode

The type of course presentation was distributed throughout the choices offered.

The majority presented the courses in a subject sequenced way in stages or years with theory, graphics and practical elements taught separately. A smaller group used a form of unitised presentation utilising the integration of theory, graphics and practical elements while another group (the smallest) used a systems approach with a modular organisation and self-paced learning.

No one method of presentation was favoured across Australia.

c) Curriculum materials/resources

i) Colleges in all TAFE authorities used locally prepared typed notes, work sheets, check lists, practical aids and models supplemented by lectures and demonstrations. One TAFE authority (A) indicated that it also used material from other authorities.

ii) Colleges in two TAFE authorities (C and G) used locally produced self-paced packages in print form supplemented with film, film strip, video etc. One authority (E) did not use such packages. The remainder did not answer the question.

iii) One authority (C) indicated that it used nationally developed learning materials. This response was puzzling as it seems that no such material has been produced.

d) The relation between method of documentation and degree of implementation

Three options were suggested:

i) A minimal NCC syllabus documentation with broad course aims and objectives, and general content areas listed. TAFE college staff would then be free to interpret the syllabus in the light of local needs (the short form).

Two respondents (A and E) favoured this option.

ii) The NCC syllabus rewritten into a local short syllabus by the TAFE authority curriculum branch so that TAFE colleges would be free to interpret the syllabus in light of local needs.

Four TAFE authorities (D,E,F and H) favoured this option.

iii) An NCC syllabus rewritten into a local syllabus form by TAFE authority curriculum branches so that minimum interpretation is left to colleges.

Three TAFE authorities (B,C and G) favoured this option.

Generally respondents considered that implementation is enhanced if the documentation allows the maximum degree of local interpretation. What has been called the 'short form' of documentation was favoured.

e) Monitoring of the implementation of the NCC program

All but one TAFE authority (H) agreed that the implementation phase of an NCC should be monitored to provide feedback to all stakeholders who have supported its inception and development.

Of the three options of who should be responsible for monitoring, none was particularly favoured. Three (A,E and G) preferred a formal national monitoring unit, while two (D and F) preferred statewide monitoring by individual TAFE authorities and another two (B and C) preferred college based monitoring. While opposed to monitoring of implementation, H would prefer statewide monitoring by individual TAFE authorities if, indeed, monitoring must be introduced.

Generally, respondents considered that the implementation of the NCC in sheetmetal should be monitored, but there was little agreement as to who should do it. However some authority or college-based system would be preferred over a national system.

f) Type of monitoring preferred

Taking into account that all, but one, were in favour of some sort of monitoring, the respondents were asked to indicate the approach they would prefer. Four options were suggested. Of these, none preferred monitoring to be implemented in accordance with a firm set of guidelines.

Of the seven TAFE authorities which were in favour of monitoring the implementation of the sheetmetal NCC, six preferred a co-operative, consultative and advisory approach with two of the six conceding the need for prescription in some areas. One (F) preferred a supervisory group.

g) Knowledge of degree of implementation of NCC in TAFE authorities other than that of the respondents

Only three respondents (C,E and F) claimed to have any knowledge of the degree of implementation of the NCC in other states/territories. They thought that the sheetmetal NCC was being implemented to some degree in most states/territories.

h) Summary of responses on implementation

The sheetmetal NCC has been implemented almost entirely in all TAFE authorities and has only been subjected to moderate change in that implementation. Indeed, in four authorities the NCC syllabus is used in its entirety.

The constraints on fidelity of implementation have been lack of major equipment, capital resources and adequate texts. It is generally agreed that the short form of documentation enhances fidelity of implementation.

Monitoring of implementation was favoured with the general consensus that it be authority or college-based and that it should be through a co-operative, advisory and consultative approach.

B.4.3 The impact NCC has had in the maintenance of standards between colleges and between authorities

a) Monitoring of standards - a strategy for its achievement

The representatives of every TAFE authority, but one (H), considered that there should be a strategy for the maintenance of standards and all but the representatives of authority D considered that this strategy should be a matter for a TAFE national group. As in case study A, there was a dichotomy of views on monitoring. National monitoring of implementation was not favoured, but national monitoring of standards was.

The views of the respondents to the sheetmetal questionnaire on the composition and method of operation of a national monitoring group were the same as those of the respondents to the automotive mechanics questionnaire (section A.3.3a).

b) Effect of change of form and in substance of NCC products in the transition to the rewritten local syllabus and classroom program on the quality of the curriculum product

The quality of a curriculum product was defined as the responsiveness of the product to industrial needs as perceived by NCC designers and developers.

One respondent (A) considered that there had been changes in quality as a result of the transition to the classroom and that these changes were for the better. He considered that specialist teachers were better judges, through their local contacts, of industrial needs than were curriculum experts. The enhanced sense of ownership which follows from the local input into the syllabus may have a favourable effect.

One other respondent (H), although agreeing that generally the changes which NCC products undergo in the transition to the classroom do not seriously affect the quality, suggested that the quality might be affected if licensing is involved. He did not expand his view further.

c) Effectiveness of a nationally determined assessment strategy in maintaining NCC standards

The respondents from three TAFE authorities considered that a nationally determined assessment strategy for NCC-based courses would not be effective in maintaining NCC standards. These included the respondents D, H and G the first two of who were opposed to any sort of monitoring by a national group.

Of the five who considered a nationally determined assessment strategy would be effective in maintaining NCC standards, only three (B, C and E) thought that it should be moderated and of these only one (E) that the moderation should be by a national group.

d) Establishment of a nationally determined student assessment item bank

All but one respondent (H) considered that the establishment of a nationally determined student assessment item bank would be a positive and useful strategy in helping to maintain NCC standards. Of those who thought such an item bank was desirable, all but two (C and E) would include practical tests and home assignments in the item bank.

Respondents were asked how often any nationally determined student assessment item bank should be reviewed and updated as industrial training needs change. Two respondents (C and E) considered that there should be ongoing appraisal, three (A,B and E) considered that a review every two years would be appropriate, while the respondents from TAFE authority D considered that every three or four years would be enough.

e) Exchange of examination papers

Respondent G did not answer this question. Of the others all but two (E and H) considered that an exchange of examination papers and a random selection of student scripts among TAFE colleges on a national scale would be a positive and useful strategy in assisting to maintain NCC standards.

f) Use of industrial training needs analysis

Respondent G did not answer this question either. Of the others all but two (B and D) considered that the NCC project should be preceded by a nationally determined industrial training needs analysis.

In the particular case of the sheetmetal NCC no national industrial needs analysis was undertaken as part of the NCP, but there had been four state college/industry surveys (section B.3.2). The task force had recommended that, when the NCC in sheetmetal had been introduced and implemented, a national survey should be conducted to ensure that the syllabus adequately covered the requirements of Australian industry. The CPSG deferred this activity and it has never been undertaken.

g) Constraints on maintenance of standards

There was no agreement that any particular constraint had affected the maintenance of standards. Four TAFE authorities (A,B,E and F) considered that lack of major equipment such as special machines in certain areas of the curriculum had been a constraint on maintaining standards.

h) Summary of responses on maintaining standards

It was almost unanimously agreed that there should be a strategy for maintaining standards and that this strategy should be a matter for a TAFE national monitoring group.

However there was some difference in opinion on which strategies for monitoring standards might be adopted. Some would accept a nationally determined assessment strategy but would not allow a national monitoring group to moderate that strategy. Most would accept a nationally determined student assessment item bank but would presumably leave the strategies for using the bank to the TAFE authorities.

It was agreed that the development of an NCC should be preceded by a nationally determined industrial training needs analysis.

In general in the case of the sheetmetal NCC there are no particular constraints on the maintenance of standards.

B.4.4 The cost-effectiveness of developing and implementing core curricula in sheetmetal

a) The balancing of benefits and costs

In December 1984 the convening TAFE authority for the sheetmetal NCC (Victoria) prepared an estimated total cost for the project. This was estimated to be $93 365 subdivided as follows:

. TAFEC	$20 000
. Convening TAFE authority	$ 8 279
. Other participating TAFE authorities	$54 235
. Industry representatives	$ 7 159
. TAFE National Centre	$ 3 842

Some would consider this estimate conservative as, for example, the salary cost element included only direct costs of formal staff release by transfer of funds from the central budget. Further, it included virtually no costs for materials for the evaluation of which $12 500 was earmarked but never spent (section B.3.17(d)). On the other hand, Gilham (1987) challenged the estimate. He stated that most of the work of the task force was done in the members' own time.

The estimate of more than $90 000 compares with the allocated funds of $7 800 (Appendix E). That is, the cost to the TAFE authorities exceeded by a multiple of ten the TAFEC allocation. This may be contrasted to the concern expressed (section 4.4) that a contribution of approximately $4 was made by TAFE authorities for every $1 contributed by CTEC.

One crude generalisation on which judgments on cost effectiveness might be made is that to develop an NCC in the four established sections of the sheetmetal trade together with recommendations on the type and size of the major teaching equipment required,cost $90 000. Even at this cost, 17 aims of the task force were left unachieved

The costs involved in developing the NCC in sheetmetal were not pointed out to respondents when they were asked whether they considered the benefits to students, teachers and non-TAFE stakeholders justified the cost of developing the NCC. One respondent (from authority D) did not think that the cost was justified. One respondent (H) did not give an opinion.

Respondents from only four authorities expressed an opinion on whether a locally developed curriculum would have been a cheaper and equally effective national product. Opinion was divided.

Two (D and H) considered that it would be, with H commenting that this would depend on whether the TAFE authority already had an established document. This was consistent with his view that the development of NCC in disciplines where local authority curricula were already well established was a waste of money.

Two (A and C) considered that locally developed curricula would be cheaper, but A considered that they would be less effective from a national point of view. None considered that locally developed curricula would cost more than one developed nationally.

b) The cost-effectiveness of approaches other than the national task force model

Respondents were asked whether they considered any of the following management approaches should be considered by the CPSG as a means of producing NCC more effectively:

- co-operative project method
- delegation to a TAFE authority
- use of a project officer (section B.3.2(a)).

Respondents from only two authorities (A and E) would consider a method of management other than the task force. A favoured the use of a project officer; E delegation to a TAFE authority.

c) Summary of responses on cost-effectiveness

The virtually unanimous opinion was that the cost of developing the NCC in sheetmetal was justified in terms of the benefits flowing to students, teachers and non-TAFE stakeholders. There was some opinion that locally developed curricula would be cheaper, but not as effective as one developed nationally. The task force method of management was strongly favoured as a cost-effective approach.

B.4.5 The benefits of NCC to students and teachers

Among the aims of the task force were to:

- co-ordinate the development/exchange of teaching-learning resource materials;
- evaluate and improve the quality of sheetmetal trade training programs and associated resource materials;
- improve and facilitate the professional development and/or exchange of sheetmetal teachers in Australia;
- undertake research into issues of national concern to sheetmetal trade teachers; and
- develop a set of sheetmetal trade reference manuals.

That is, the task force set out to achieve a number of benefits for both students and teachers.

With regard to the development/exchange of teaching-learning resource materials, a working party reported that there was a drastic shortage of relevant teaching resources in Australia. The CPSG approved an allocation of $1 000 for 1984-85 to co-ordinate the future development of materials to meet the needs of all states/territories. This money was subsequently ear-marked for a meeting between representatives of the task force and the DEIR to discuss the development of teaching-learning resources.

The CPSG recommended an allocation of $12 500 for the evaluation of existing resource material and the production of new material. It appears that this money has never been made available. A working party was established to identify all the resources available to all teachers throughout Australia in relation to the common core but there is no record of it completing that task.

The CPSG allocated no funds for the improvement and facilitation of the professional development and/or for research into issues of national concern to sheetmetal trade teachers.

With regard to the development of sheetmetal trade reference manuals, this was to be a topic of the discussions with DEIR for which $1 000 was allocated. Although two trade reference manuals, developed by the DEIR, are at the proof-reading stage, the discussions have never taken place.

It was in this context that responses were sought on the benefits to students and teachers of the sheetmetal NCC.

a) Quality of terminal competencies of NCC course graduates - a student benefit

All respondents, except two (D and H), considered that the terminal competencies acquired by graduates of the sheetmetal NCC were better suited to meet the current and perceived potential industrial/commercial work tasks than those acquired by those trained under locally developed programs.

Those who considered that graduates of the sheetmetal NCC had more relevant terminal competencies were asked to explain their reasons. The most important was the fact that the NCC was the result of a national cross-fertilisation of ideas and opinions based on a reasonably high degree of common content. The importance of an industrial occupational analysis was emphasised although no such analysis had been conducted nationally. Although recommended by the task force, it was not agreed to by the CPSG (section B.3.2).

The need for the presence of national and state industrial representatives on the task force was also seen as important. In the case of sheetmetal, the NMEITC was represented. There was no direct industry representation.

b) Graduate mobility - a student benefit

The respondents from all authorities, but one (H), considered the mobility of graduates to be either relevant or highly relevant in sheetmetal. H commented that it was not an issue because only 1% of Australian workers require mobility.

c) The benefits to lecturers

Respondents were asked to assess the relative benefits to lecturers. The factors as rated, in order of perceived benefit, were:

- a more industrially/occupationally relevant course due to the national scope of the NCC based program;

- availability of nationally utilised texts and references This was a strange response in that respondent (H) commented that none were available and that discussions with DEIR on this question seem to be stalled. Perhaps respondents were commenting on the trade reference manuals being prepared by the DEIR in collaboration with the TAFE colleges and independently of the task force and CPSG or on the internal exchange of learning materials between some TAFE authorities;

- staff development on a national scale for participants in task forces and working parties due to the exchange of ideas. It was generally agreed by members of the task force that this had eventuated (section B.3.8);

- NCC tends to give effect to common national standards;

- the implementation of the NCC tended to generate improved dissemination of information in the sheetmetal area; and

- a more enhanced TAFE image, both state and national, due to the higher expectations of the industry for TAFE generally.

A feeling of ownership by all participants and access to nationally determined student assessment strategies were not seen as benefits of the NCC to sheetmetal teachers.

With regard to the lack of perceived benefit of a feeling of ownership, the standard research, development and diffusion model of curriculum design had been used and therefore a feeling of ownership of the curriculum by all participants was unlikely to be seen as a benefit to teachers.

In the case of nationally determined student assessment strategies, nothing has been done. It was decided that student assessment was a state/territory, not national responsibility (section B.3.6(a)).

d) General benefits to students

Respondents were asked to rank the five suggested benefits to students. All, but two, were considered highly beneficial. Those considered beneficial were (in order of perceived benefit):

- portability of students who transfer across states/territories. This was in stark contrast to the respondents to the automotive mechanics case study who considered this the least important benefit to students;

- more relevant and effective terminal competencies than those provided through earlier courses;

- availability of nationally approved student learning materials; and

- availability of nationally approved tests and references.

In the case of the latter two respondents must again have been referring to the trade reference manuals being prepared by the DEIR.

The availability of computer-assisted learning strategies and the portability of graduate vocational qualifications were seen as not very beneficial to students. In the case of the former, one respondent (C) commented that none were yet available, while in the case of the latter, again the stark contrast with the automotive mechanics case study will be noted. In that case portability of graduates qualifications was a most important student benefit.

e) The most important benefits

For lecturers, the most important benefit was the existence of a more industrial/occupational relevant course than had been available previously. There was a plea also for nationally available texts and references. Perhaps the $12 500 allocated by the CPSG, but apparently never used, could actually be made available.

For students, most important benefits were perceived to be the ability to transfer across states/territories while they are undertaking the course and to gain more relevant and effective terminal competencies than previously. There was again a plea for nationally approved student learning materials, texts and references.

B.4.6 The opinions of bodies outside TAFE.

It was considered important to have the first-hand opinions of employees on the sheetmetal NCC. This was done by interview.

a) General awareness of the sheetmetal industry of NCC courses

Respondents were equally divided on whether sheetmetal employers were generally aware that their employees were being trained with an NCC-based course. Aspinall and Uscinowicz (1987) did not consider that employers in the sheetmetal industry were aware that their apprentices were trained using an NCC.

b) Extent of employer expectation of implementation of NCC based course

One respondent (H) did not answer this question. This TAFE authority is the one which indicated that it had not implemented the course and so employers could have no expectations.

Of the others, all but one (E), considered that employers would expect the NCC to be implemented fully and that they would expect positive benefits to the industry stemming from the implementation. This view was confirmed by Aspinall and Uscinowicz (1987) who commented that, as far as possible any electives should be consistent across the states/territories and that these should be implemented in full also.

Although it was reported that employers were concerned that standards between different colleges varied too much, there was no enthusiasm for centralised external examinations as it was thought that such a system of examinations would lead to too much rigidity. Rather some form of moderation was favoured.

(c) Views of employers on the quality and value of NCC

Aspinall and Uscinowicz (1987) commented that a single TAFE sheetmetal course across Australia was the policy of both employers and unions in the industry. Major changes were seen to be ahead in the sheetmetal industry and the major benefits of an NCC were seen to be the removal of a need for duplication in a time of change and the establishment of a national communications network as an efficient way of exchanging ideas. However, the current NCC was considered to be no better than the previous TAFE authority courses. A strong preference was expressed for an industry-union driven curriculum.

d) General benefits to employers

Respondents to the questionnaire were asked to assess the relative benefits to employers. The factors as rated, in order of perceived benefit, were

- a form of training ensuring that the graduate is better prepared for technological changes in the industry;
- the potential for better productivity;
- more effective student/graduate terminal competencies to perform the current work tasks than those stemming from earlier courses; and
- the development of work attitudes leading to an improvement in job satisfaction.

An awareness by employees of national standards and improved portability of skills were considered by respondents to be of little benefit to employers.

e) Effective feedback from industry to TAFE

Respondents to the questionnaire were asked to rate the relative effectiveness of a number of channels of feedback from industry to TAFE. The factors as rated, in order of perceived effectiveness, were:

- official liaison programs such as teacher release to industry;
- ongoing, informal interchange arising from TAFE teachers visiting industry and vice versa;
- interchange of information between TAFE and industry within TAFE advisory committees; and
- industry representation on TAFE college councils.

Three of the suggested factors were considered relatively ineffective. They were

- representation of state/territory industry training bodies (e.g. ICTC) on TAFE curriculum committees and vice versa;
- the operation of state/territory statutory regulatory authorities; and
- social interaction between individuals from TAFE and industry.

Aspinall and Uscinowicz (1987) presented quite a different opinion on the effectiveness of feedback from industry to TAFE than did the respondents to the questionnaire. They saw that there was a problem in the lack of correlation between what was happening in industry and what was being taught in TAFE. This had culminated in industry and union representatives resigning from TAFE curriculum committees and from the National Metal Engineering Industry Training Committee both nationally and in the states and deciding to define their training needs for themselves. They held the view that the established curriculum was so entrenched that it was not amenable to change and that industry representatives found trying to advise TAFE curriculum officers extremely frustrating. In effect all feedback between TAFE and industry ceased because, in the view of industry, it was useless trying to make TAFE listen.

As a consequence of this withdrawal from training committees, employers and unions formed a 'compact' one aspect of which was to rewrite the whole structure of training. This culminated in a proposal since accepted by the Commonwealth Government to fund a career development and training centre for the engineering industry. Significantly no TAFE representative has been invited to join the board. Employers and unions are coming to agreement on the structure of the sheetmetal industry, the career paths and training needs without TAFE involvement and, when the agreement is completed, TAFE will be told of their needs. In the meantime it was noted that TAFE was making changes on its own initiative and these changes may be irrelevant.

Aspinall (nd, probably 1987) listed the priority issues for industry. These include:

- review of the current apprentice training systems and procedures in relation to their ability to satisfy both present and future skill needs of industry;

- investigation and development of appropriate traineeship packages for industry;

- review of the effectiveness of block release, sandwich courses and modular training; and

- design of common core curriculua for eneric and, in some cases, for specific skills.

f) Views of licensing and professional bodies on sheetmetal NCC

There is no licensing body in Australia concerned with sheetmetal work. The professional associations are the various metal industry associations across Australia. These were at one time 'delighted to support the task forces' (Meyer, 1984), but it would seem that, more recently, attitudes have changed dramatically.

g) Summary of views of employers as seen by respondents

Respondents were divided on whether sheetmetal employers were aware that their employees were being trained in an NCC-based course. They did consider that, if they were aware of the course, employers would expect it to be implemented fully and that they would expect positive benefits to flow from that implementation.

The principal benefit to employers was perceived by respondents to the questionnaire to be graduates who are better prepared for adjusting to technological change in the sheetmetal industry than those trained under the earlier individual TAFE authority courses. However, industry representatives expressed grave disquiet at what they saw as the lack of relevance to current industrial practice of TAFE courses and the reluctance of TAFE to respond to industrial needs.

B.4.7 The role of the CPSG in the development and implementation of the sheetmetal NCC

a) Extent of CPSG involvement

Respondents were asked whether the CPSG should be involved across the full spectrum of NCC activity (that is planning, designing and development to implementation). All respondents replied and, all but two (A and H), considered that it should be. G claimed that the CPSG considered that the production of the NCC document was the end of the matter when, in reality, it should be concerned not only with implementation, but evaluation as well.

b) Involvement of CPSG in some form of monitoring of NCC implementation in all TAFE authorities

Again all respondents replied, and all but three (A, C and H), considered that the CPSG should be involved in some form of national monitoring implementation.

c) Criteria for selection of projects

Respondents were unanimous that the six criteria for the selection of projects agreed by the CPSG (section 3.7.2) should be considered as guidelines only.

d) **Effect of CPSG on the development and implementation of the sheetmetal NCC**

Respondents were asked to rate the relative importance of a number of possible effects that the CPSG had evinced on the development and implementation of the sheetmetal NCC. The effects as rated, in order, were:

- the CPSG had produced a positive improvement in the quality of NCC products due to the global input of senior experienced curriculum managers;
- the CPSG had been responsible for setting up more relevant and effective task forces than those which may have emerged without the knowledge and experience of the CPSG;
- the CPSG may have hindered the task force in its attempts to achieve goals which it considered to be advantageous to the NCC study area. For example, respondent G noted that the CPSG decided that task force meetings should be held in the convening state (section B.3.8). This it was claimed, led to a loss of cross- fertilisation of ideas which might have arisen from the opportunity to observe other teaching strategies and facilities and did not help members understand the problems of other TAFE authorities; and
- the CPSG has provided an essential intermediary role between the task force and the ACTD.

B.4.8 The questionnaires in overview

The responses to the questionnaires can be summed up by the following conclusions.

a) The sheetmetal NCC has been implemented almost entirely in all TAFE authorities and has been subjected to only moderate change in that implementation.

b) Monitoring of both implementation and standards is considered necessary but only the strategy should be determined at a national level. The actual monitoring should be done at authority or college level.

c) The development of an NCC should be preceded by a nationally determined industrial training needs analysis.

d) The cost of developing the NCC in sheetmetal was justified in terms of the benefits flowing to students, teachers and non-TAFE stakeholders.

e) The most important benefit of the sheetmetal NCC to lecturers was the existence of a more industrial/occupational relevant course than had been available previously.

f) The principal benefit to students was the ability to transfer across states/territories while they are undertaking the course.

g) Both teachers and students were handicapped by the absence of nationally approved student learning materials, texts and references.

h) Employers who are aware of the existence of sheetmetal NCC would expect it to be implemented fully in each TAFE authority.

i) The principal benefit to employers was perceived to be that the training ensured that graduates were better prepared for adjusting to technological change than those trained under earlier individual TAFE authority courses. However, industry representatives expressed grave disquiet at what they saw as the lack of relevance to current industrial practice of TAFE courses and the reluctance of TAFE to respond to industrial needs.

j) The CPSG should be involved in all phases of an NCC from planning through to evaluation.

k) The criteria for the selection of projects should be considered as guidelines only.

CASE STUDY C: THE REAL ESTATE NCC.

As in the other case studies, those readers who wish only an overview of the outcomes of the case study are directed to Sections C.4.11 and C.6.8.

C.1 Reason for selection

The development of the real estate NCC was chosen as a case study because there were at least three elements which distinguished it from the other two.

a) The study was in a discipline outside the mainstream of traditional technical (trade) education and in that growing field of TAFE concerned with business and commerce.

b) Real estate was an enterprise covered by legislation which differs between states/territories and, at first glance, seemed to have such wide differences in regulation and practice that an NCC would be impractical. This point is illustrated by the diversity between the state and territory licensing courses before the NCC was developed (Table 4) and the fact that in some states/territories one licence covers all aspects of the profession and in others up to ten separate licences are available.

c) The origin of the NCP lay in a submission from the Real Estate Institute of Australia (REIA) rather than being an initiative of TAFE. (Lawrence, 1983). The policy of the REIA was to promote a uniformity of standards of study across Australia while the objective of its national education committee was to develop a standard of technical expertise which was recognised nationally.

C.2 The justification for a national curriculum in real estate

In April 1983 the REIA put a submission (Lawrence, 1983) to the ACTD that there was a need for a national curriculum in real estate studies. It was noted in the submission that the structure of the real estate industry was changing from small independent firms operating in local areas to large marketing and franchise organisations. It was stated that there were at least 20 real estate organisations with interstate affiliations. To meet the demand of the changing nature of the real estate industry, the need for personnel with a similar understanding and approach to real estate practice was emphasised.

TABLE 4

COURSE COMPARISON SCHEDULE
REAL ESTATE COURSES FOR LICENSING PURPOSES

STATE-TERRITORY	COURSE TIMETABLE Period Annual Semester	Topic to total	Ratio to first 23	TEACHING MODE - Internal Ext.Studies	Study Units (number)	Teaching, Hours Internal Ext.Studies	Assessment Int - Ext. Progressive/ Final Exam	Learning Aids Used	EXT. STUDIES STUDENT/TUTOR contact
TASMANIA	Semester timetable 3 years (6 semesters)	23/30	23/23	Internal	N/A	N/A	N/A	Films Slides O/H Project	12 Seminars (2 per semester) Discussion groups - Voluntary
				External	103	605	40% / 60%		
VICTORIA	Semester timetable 3 years (6 Semesters)	23/30	22/23	Internal	242	606	20% / 80%	Films TV Video O/H Project	6 Seminars (1 per semester) voluntary
				External	242	Not supplied	20% / 80%		
SOUTH AUSTRALIA	Semester timetable 3 years (6 Semesters)	22/30	21/23	Internal	120	240	30% / 70%	Films Slides O/H Project	6 Tutorials (1 per semester) Discussion groups - Voluntary
				External	51	Not supplied	30% / 70%		
WESTERN AUSTRALIA	Annual timetable 2 years	25/30	21/23	Internal	245	490	20% / 80%	Films Slides O/H Project	Nil
				External	128	690	20% / 80%		

TABLE 4 (continued)

NEW SOUTH WALES	Semester timetable 3 years (6 Semesters)	21/30	20/23	Internal	252	1000 + field days	50% / 50%	Films Slides TV Video O/H Project	4 Seminars 4 Tutorials(8) (1 ea. semester) Compulsory
				External	252	Not supplied	50% / 50%		
QUEENSLAND	Semester/Annual timetable Internal-Ext.Stud. 2 years (4 Semesters)	22/30	21/23	Internal	128	384	Varies - Some subjects	Nil	Nil
				External	120	375	40% / 60% Others-0/100%		
AUSTRALIAN CAPITAL TERRITORY	Annual timetable 2 years	16/30	16/23	Internal	320	560	Generally 60% / 40%	Films Slides Tapes O/H Project	N/A
				External	N/A	N/A	N/A		
NORTHERN TERRITORY	Semester timetable 3 years (6 Semesters)	20/30	18/23	Internal	90	240	Not Supplied	Not Supplied	N/A
				External	N/A	N/A			

Note This comparison schedule has been compiled from information supplied by the educational authorities in each state and territory and does not take into account any other data relating to the respective courses apart from what has been supplied and any changes which may have occurred following each state of the survey.

Source Lawrence: 1983.

In addition to the development of national real estate firms, an increasing tendency for small real estate agents to move from state to state was also noted. It was stated that this was creating licensing problems because of the lack of reciprocal agreements between the various state and territory licensing authorities and that a national curriculum was a prerequisite for achieving reciprocal licensing agreements.

As an additional justification for a national curriculum the REIA suggested that TAFE would benefit through the rationalisation of the cost of curriculum research and development as well as that of developing teaching aids such as texts and videotapes.

At its June 1983 meeting the CPSG decided that a real estate NCP should be a priority for 1984 and delegated responsibility for organisation of the project to Queensland TAFE.

In September 1983 the Curriculum Branch of the Queensland Division of TAFE submitted a proposal to the CPSG for an NCP in real estate (except for valuation) (Queensland TAFE, 1983).

Besides the justification for a real estate NCC suggested by the REIA, the further point was made that many real estate students move interstate and make claims for subject exemption. Variations in duration, level and combination of topics did not allow for continuity of study without substantial analysis and re-orientation, although a substantial common component may have existed in each course concerned.

C.3 The demand for the NCP

The demand for the project is seen separately from the justification. It has been interpreted from two perspective - those who wished the project to proceed and those who would use the outcomes.

Queensland TAFE (1983) reported that each of the eight TAFE authorities wished the project to proceed together with the REIA and the Conference of Licensing Authorities. This latter is the annual meeting of all state and territory authorities responsible for the licensing of real estate agents.

It was estimated that 7900 students were, at the time of the submission undertaking real estate licensing courses in Australia. It was also estimated that a potential annual demand of over 20,000 existed for a real estate salesperson course.

C.4 The history of the real estate NCC - the aims and achievements.

A task force was established by the CPSG and met for the first time in April 1984 (Seary, 1984a). The task force had ten aims.

C.4.1 Collection of national occupational data for a number of real estate vocations

The occupational data was to cover the vocations of salesperson, branch manager, real estate agent, real property manager, auctioneer and stock and station agent.

It was acknowledged that there was a strong relationship between the vocations with a high degree of common knowledge and skills. It was suggested that an early acquisition of occupational data across all vocations would enable the educational requirements of each vocation and the relationships between these requirements to be determined and hence the conceptual structure of the courses to be developed.

The estimated date of completion of this aim was May, 1984. The cost for this part of the project was estimated to be $7 700. The actual amount allocated by the CPSG was decreased to $6 700 because the cost of printing and distribution costs were not approved (CPSG, 1983a).

In May 1984 the task force reported that it was concerned with the tight time frame under which it had to operate. The DACUM method of curriculum development was to be used and this part of the project was to be completed by June. Simultaneous DACUM sessions were used throughout Australia to gather the occupational data required (NTRESTF, 1985). Over 320 real estate practitioners across Australia were involved in the DACUM sessions. At its June 1984 meeting the CPSG was informed that the occupational data collection was in progress (CPSG, 1984b).

In the first instance the emphasis was on salesperson, branch manager and real estate agents in what was called phase 1 of the project. The task force set up three working parties, one for each of these vocations. These working parties met in July 1984 and collated the DACUM data which had been submitted by the states/territories (Seary, 1984c).

In September 1985 the task force reported that it had completed the task of gathering occupational data for the real estate vocations in both phases 1 and 2. It also reported that, during the analysis of the occupational data in phase 1, much similarity was found in current real estate practices across each state/territory.

C.4.2 Development of a draft national core curriculum document for:

- **salesperson**
- **branch manager**
- **real estate agent.**

It was proposed that NCC development should occur in two phases with initial priority being given to the above as they were those in highest demand and had a particularly strong relationship to each other.

This part of the project (phase 1) was due to be completed in July 1984 at an estimated cost of $3 900. The actual amount allocated was $2 600 as the CPSG refused to meet some of the costs of collating, reproducing and distributing the document (CPSG, 1983a). At the April 1984 meeting of the task force, the time line was changed to September (Seary, 1984a). The CPSG was informed of this in June (CPSG, 1984b).

As indicated in section C.4.1 the task force had established three working parties to deal with the three vocations in phase 1. By August 1984 each had started to draw out a national core syllabus (Seary, 1984c). These were discussed at the September 1984 task force meeting. Those for salesperson and branch manager were broadly acceptable but it was considered that the real estate agents draft needed total review. The intention was for each syllabus to be in an identical format to facilitate rapid identification of content overlap. This was to provide an easy basis for course exemptions.

The CPSG discussed their intention in December (CPSG, 1984d). It was worried that the common components of the syllabuses might be organised in subjects and so attempt to impose a rigid structure on the TAFE authorities. The task force was asked to report on these matters to March 1985 meeting of the CPSG.

As the task force was unable to discuss this request before the report was required by the CPSG, Seary (1985a) prepared an interim report. He reported that the core syllabuses were constructed so that they consisted of major topics, sub-topics and related student objectives, but in such a way that individual TAFE authorities could reach agreement on a common core without being bound to a rigid subject structure. Nevertheless he recommended that TAFE authorities should examine their own course structures to adopt a subject structure as close as possible to that recommended in the core syllabuses. He also reported that the final report on phase 1 would be presented to the CPSG in March, 1985.

In March, 1985, the CPSG sought financial support from the real estate industry (Fricker, 1985b) and this was agreed, conditional upon the NCCs being organised into subjects. As the task force had assured the CPSG that there would be no rigid subject structure, this condition upon which financial assistance depended did not sit easily with it. It was concerned that:

- the concept of subjects implied that states were obliged to implement the subject requirements at state level;

- confusion could arise between core subjects and state subjects especially where similar nomenclature was involved; and

- states/territories were obliged to conduct subjects of varying lengths. (Jagger, 1985b).

The task force was not able to resolve these issues and referred them to a working party. Rather than organising the courses in subjects, the working party recommended unitisation where units would be:

- discrete areas of knowledge and skill;
- able to be included across subjects; and
- able to be included across courses.

In September 1985 the task force reported to the CPSG that draft national core syllabuses had been developed for salespersons, branch managers and real estate agents. It had been found that there was some overlapping of content in these core drafts and, although they had been designed to stand alone, they represented a hierarchy of study and a possible career progression for some students. To facilitate career progression, the courses were each organised as major topics, sub-topics and student objectives in order that overlap could be identified and reciprocity enhanced. Although the real estate industry was anxious that the course be organised in subjects, this was considered impractical by the task force which compromised by organising the course in units.

The task force recommended to the CPSG that the draft national core syllabuses for salesperson, branch manager and real estate agents be:

- approved by the CPSG;
- forwarded for comment to those associations and authorities representing the real estate industry;
- forwarded by the CPSG to the ACTD for approval; and
- implemented as soon as possible by all Australian TAFE authorities (TNRESTF, 1985).

There is no documentation of the CPSG considering these recommendations, but the national core syllabuses were accepted in principle by the Licensing Authorities National Conference in October, 1985 (Jagger, 1985c).

In the achievement of its aim, the task force reported that the integration and inter-relation of the states/territories licensing arrangements had proved to be a factor which was not easily accommodated. The plethora of state/territory licensing arrangements often made it difficult to reach agreement on common core issues.

C.4.3 Development of a draft national core curriculum document for:

- **real property manager;**
- **auctioneer; and**
- **stock and station agent.**

In September 1984, business agent was added to the above (CPSG, 1984c).

This was to be phase 2 of the NCC development and was due to be completed in March 1985. At the April 1984 meeting, this deadline was brought forward to October 1984.

The CPSG recommended that $8 000 be allocated in 1985 to this project and agreed to seek the money from the REIA (CPSG, 1984c).

In February 1985, New South Wales TAFE notified the convener that it was withdrawing from phase 2 of the project. Mellor (1987) indicated that this was because the NSW licensing authority did not support the concept of the common core. At about the same time, Western Australian TAFE was understood to indicate that it was probably withdrawing also (Seary, 1985b).

It was claimed that the actions of these states would jeopardise the NCP in real estate because other states/territories might seek to withdraw and because industry would be disinclined to support financially a project which did not have national TAFE support. It was pointed out that, without the support of all TAFE authorities an NCC would not be produced, but merely a curriculum deriving from the co-operative project method (section 4.1.4(a)).

Seary (1985b) saw the withdrawals as somewhat embarrassing to TAFE nationally as since:

- the CPSG and the ACTD had endorsed and approved phase 2 of the project late in 1984. Indications were that all TAFE authorities were committed to the project. (A reading of the relevant CPSG minutes does not support this statement - nowhere is it recorded that the project was endorsed and approved. The strongest endorsement recorded was a recommendation that $8 000 be allocated for 1985 (CPSG, 1984c)).

- industry had been led to believe that, as all of TAFE authorities approved and supported the project, it would go ahead. (There was no doubt that this would have been the impression given particularly as it had been decided to approach industry for financial support. However nowhere was it documented that an undertaking had been given).

- industry was asked to fund the project in 1985 on the basis that all TAFE authorities would be participating. Funding requested of industry was based upon total TAFE participation. (This was not strictly correct. No approach had, by then, been made to industry, but Seary (1984d) had indicated that some TAFE authorities might not be able to fund the project further as a total of $34 400 would be required in 1985 to meet the cost of holding meetings).

- after industry had been asked to support the project financially, two of the principal TAFE authorities had withdrawn. (Again this was not strictly correct, for at the time of writing, industry had not been formally approached).

- the draft syllabus for business agents which was to be developed in 1985 had been included at the request of New South Wales, Western Australia and the Northern Territory. With the withdrawal of the two principal progenitors, it was doubtful if that development should proceed.

- phase 2 was linked to phase 1 and a danger had developed that one half of a curriculum would be national core and the other half would be something less than that. Withdrawal from phase 2 not only would jeopardise the earlier work done but would undermine the effectiveness of the whole project.

- occupational data gathered in 1984 was to be worked upon by all TAFE authorities in 1985. The workload in 1985 would have to be spread less widely thus putting a greater strain on the remaining participants. It was suggested that it was reasonable to assume that the authorities which had withdrawn would still expect to receive the benefits of the work done.

- there was a danger of the NCP being abandoned as other states/territories may feel it necessary to withdraw.

Seary recommended to the CPSG that it exercise every effort to ensure that all TAFE authorities maintain their active participation in the project. He also indicated that, when all seven core curricula (three on phase 1, four in phase 2) were completed, it was proposed to look at overlap and similarity to provide a basis for exemption and reciprocity between the cores and for a single national real estate studies program.

The decisions of New South Wales and Western Australia to withdraw brought immediate reactions from the real estate industry. The representative of the national licensing authorities on the task force commented to the chairman of the CPSG that any shelving of the project or reduction of the task force would be a backward step and would rekindle past views of the licensing authorities that a national common core was not possible because of a lack of commitment by TAFE (Dalton, 1985). The executive director of the REIA also expressed its concern that the industry would suffer through lack of proper courses (Lawrence, 1985). At the March 1985 CPSG meeting the Western Australian representative indicated that his TAFE authority had not withdrawn, but would continue to participate by mail. With regard to New South Wales, the chairman was to approach the Director-General (CPSG, 1985b). The report of the task force to the June 1985 meeting of the CPSG stated that this issue had been resolved (Jagger, 1985a).

In September 1985 the task force reported that it had completed syllabus documents for stock and station agent and business agent (Jagger, 1985b). It also reported (NTRESTF, 1985) that it considered that a unique opportunity existed for a national real estate studies program and recommended to the CPSG that a national real estate studies program incorporating the cores from phases 1 and 2 be developed as soon as possible. There is no documentation of the CPSG considering this recommendation.

In September 1986 the convening state submitted to the CPSG a draft copy of the NCC in real estate with studies programs covering all seven branches of the occupation with a recommendation that the curriculum be endorsed. (Stevenson, 1986). The curriculum (TAFE, Queensland, 1986) was endorsed with minor amendment by the CPSG which decided to forward it to the ACTD for approval (CPSG, 1986e).

C.4.4 Production of an analysis of responses to the NCC document for use as a basis for determining standards and for amending the content, scope and objectives of the courses

This aim was related to both C.4.2 and C.4.3. When the draft courses were completed, it was intended to circulate them for comment and to use these comments as a basis for amending the draft documents.

The analysis of the responses to phase 1 and the consequently amended course were to be completed in November 1984 at an estimated cost of $3 900. The work on phase 2 was to be completed in May 1985.

As indicated above the task force had initiated three working parties to deal with the vocations in phase 1. In August 1984 the task force reported that each had prepared course, topic and content statements to be reviewed and commented upon by each TAFE authority and by industry prior to the next meeting (Seary, 1984c).

The NCC as published (TAFE, Queensland, 1986) is the result of much review and comment. However, no specific standards are set. The student outcomes are listed in some detail with a recommended minimum instruction time.

C.4.5 Production of appropriate student progress assessment systems for the national core component of each separate real estate course

This was to be completed in November 1985. In fact, no assessment systems appear in the NCC document. (TAFE, Queensland, 1986). There is a general recommendation that assessment be a combination of continuous assessment and final examination and that it should include assignments, field work, projects and tests.

C.4.6 Determination of specialisations as course electives for identified branches of the real estate industry

This was due to be completed in March 1985. The NCC as produced (TAFE, Queensland, 1986) contained elective specialisations for rural and business salespersons.

C.4.7 Development and exchange of teaching-learning resources

The REIA in its submission to the ACTD (Lawrence, 1983) noted that there were nearly 100 prescribed texts used in real estate across the nation. TAFE, Queensland (1983) made the point that there was a potential to share teaching-learning resources.

This part of the project was due to be completed in September 1985. However the issue was not raised until that time (Jagger, 1985b) when the task force expressed concern that consideration needed to be given to national resources and national correspondence texts. (Jagger, 1985b). The REIA indicated a willingness to proceed with the development of resources but sought a commitment from all TAFE authorities to early implementation of the NCC. The task force recommended to the CPSG that the education resources needed to support the national core syllabuses in salesperson, branch manager and real estate agent be investigated for immediate development/or acquisition. There is no documentation of the CPSG considering this recommendation (TNRESTF, 1985).

Although the NCC as produced (TAFE, Queensland 1986) identified the development of shared resources leading to a national pool of educational materials as a potential major achievement of the NCC program, it was recognised that this had not been achieved as there was a dearth of publications suitable for the Australian real estate market. However a list of some resources suitable for Australian market conditions was provided and it was anticipated that, with the implementation of the NCC, additional suitable resources would become available relatively quickly. A concept proposal to develop a data bank for real estate sales and marketing which the REIA was prepared to consider supporting financially was submitted to the CPSG (Jagger, 1987), but was not accepted because the CPSG considered that sufficient information was currently available (CPSG, 1987c).

C.4.8 Evaluation of the implementation of the real estate NCC

This was not specified in the original aims, but was designated in the TAFE Queensland proposal (1983) as an on-going activity for 1986-87. In its report to the CPSG in September 1985, the task force (TNRESTF, 1985) recommended that the CPSG approve the following actions in principle:

- each TAFE authority be responsible for advising the convening authority (Queensland) in April of each year of any developments affecting the cores, for example, changes of content or licensing requirements;

- the Queensland TAFE authority be designated the authority to monitor implementation until 1990 and to be responsible for collating and disseminating information regarding the core syllabuses; and

- the Queensland TAFE authority keep the CPSG informed of any minor changes made nationally to the core syllabuses and the need for any major national changes.

There is no documentation of the CPSG considering these recommendations.

C.4.9 Development of external studies courses in real estate parallel to the proposed NCC

In March 1984 the heads of external studies of all Australian TAFE authorities endorsed the concept of the development of a parallel external studies course in conjunction with the real estate NCC. Such a course would be designed not only for use by external students but also as a basis for self-paced learning by on-campus students. It was proposed that an external studies working party be appointed to work in parallel with the existing task force. The working party was to consist of both external studies and business studies experts from each TAFE authority and was to be convened by a head of a TAFE external studies institution (Seary, 1986b).

The project was conceived to avoid the duplication of effort which would occur if each TAFE authority developed its own external materials based on the NCC. It was claimed that the development of a course which was acceptable to all authorities as an external studies program and which could be used as the basis of a self-paced, on-campus program would ensure uniform quality of delivery not only between authorities but also between modes of delivery.

A number of other benefits were propounded:

- concurrent development of the NCC and an external studies course would ensure that both the potential and the limitations of the external mode could be considered during preparation;

- students would have a choice of modes as soon as possible;

- cost-benefits, in that curriculum decisions with unnecessary cost implications for external students could be avoided and any cost saving opportunities which the external mode may provide can be utilised;

- the easing of demand on traditional buildings and facilities by the increased use of external studies; and

- off-campus materials would be produced concurrently with the syllabus development, and the new courses for both on-and-off-campus students could be introduced at the same time.

A time-line of 18 months (that is, August 1986) was proposed and $15 000 per subject was the estimated cost. Assuming six courses, a total cost of $90 000 was estimated. The CPSG (1984c) deferred consideration of this proposal until the work on the development of external studies materials in accounting had proceeded further.

In September 1985 the task force urged that consideration be given to the development of national correspondence texts based on NCC documents. (Jagger, 1985b). The importance of this lay in the fact that, in some TAFE authorities, the majority of students in some course areas (for example stock and station agent) were external. Indeed in Tasmania, all real estate students are external. It was suggested that one state could act as the national distribution point for some external real estate courses rather than have individual TAFE authorities replicating correspondence texts for a small number of students.

The task force recommended to the CPSG that consideration be given to the development of national correspondence texts based on the national core syllabus documents. No decision was made on that recommendation.

C.4.10 Provision for the portability of qualifications between states/territories

In its discussion of the real estate NCP, the CPSG (1984d) was particularly concerned with the implications of the common core courses for reciprocity both for credit between the courses and for licensing across the states/territories, taking account, in the latter case, of the variations in licensing arrangements. It requested that the task force should report to the CPSG on this matter at its March 1985 meeting.

Seary (1985a) reported that -

- once the states/territories have incorporated the cores into their programs, a national subject reciprocity grid which could be used as a basis for a national exemptions statement could be formulated. Nevertheless, because requests for exemptions based upon reciprocal studies were minimal, Seary (1985a) suggested that such requests should not be a factor in determining the structure of the course; and

- due to the diversity of licenses across Australia, TAFE authorities should reserve the right to combine local and core content in a manner which best suits their needs.

Each TAFE authority agreed to contribute to the preparation of national unit reciprocity grids (TAFE, Queensland, 1986). The NCC as published, contains an example of such a grid. It was indicated that it would be possible to expand the grid to include all units in all national core courses in real estate, when all states and territories have their courses in place and a comparative evaluation can be undertaken. This is still a little way off.

C.4.11 A summary of the achievements

The taskforce set itself a total of ten aims, five of which were virtually completely achieved. They were:

- collection of national occupational data for seven real estate vocations;

- development of a draft national core curriculum for sales person, branch manager and real estate agents (phase 1);

- the development of a draft national core curriculum document for real property manager, auctioneer, stock and station agent and business agent (phase 2);

- production of an analysis of responses to the NCC document for use as a basis for determining standards and for amending the content, scope and objectives of the courses; and

- determination of specialisations as course electives for identified branches of the real estate industry.

In addition, two others were achieved in part. They were:

- development and exchange of teaching learning resources. Lists of available resources were provided in the NCC document, but there was no indication of materials being prepared specifically for the NCC;

- provision for the portability of qualifications between states/territories. The foundations for this work were laid in the NCC document.

It should be noted that the task force had always considered that these could not be realised until after the completion of the project (Jagger, 1987).

Three aims were not achieved. They were

- production of appropriate student progress assessment systems for the national core component of each separate real estate course. This appears not to have been considered by the task force;

- evaluation of the implementation of the real estate NCC. Recommendations on evaluation were not considered by the CPSG.

- development of external studies courses in real estate parallel to the proposed NCC. Originally this part of the project was deferred by the CPSG. Subsequently the task force recommended to the CPSG that consideration be given to the development of national correspondence texts based on the national core syllabus documents. The CPSG made no decision on this recommendation.

C.5 Funding of the project

As the project progressed, the CPSG (1984b) expressed concern at its cost to TAFE authorities and agreed to approach the REIA for financial support. In August 1984, task force members were asked if they could give any indication of costs being incurred by their respective authorities which were:

- over and above those anticipated;
- associated with conducting the DACUM exercise (as indicated above, the DACUM technique of curriculum development was used); and
- impinging upon the successful conduct of the project. (Seary, 1984c).

In November 1984, Seary (1984d) indicated that the request to task force members had met with little response, but that it was clear from discussion that the project was costing more than initially anticipated and that TAFE authorities were concerned to the extent that some TAFE authorities might not be able to fund the project further as a total of $34,400 would be required in 1985 to meet the costs of holding meetings. It was proposed that this money be sought jointly from the REIA and the licensing authorities. Seary 1984(b) reported in February 1985, that no indication had been received from industry as to the extent of its commitment.

As there was no certainty of to whether or how much industry would contribute, the CPSG was to be asked to consider:

- requesting the TAFE authorities to pick up any shortfall to allow the project to continue;
- scaling down the project for 1985 to match the funding available; and
- standing down or postponing the project until a later date.

In February 1985 New South Wales TAFE notified the convener that it was withdrawing from the project while Western Australian TAFE indicated that it probably would. (Seary, 1985b).

As indicated in section C.4.2, in March 1985 the chairman of the CPSG approached the REIA for financial support for the real estate project (Fricker, 1985b). In his approach, he pointed out that the project, until that time, had been funded by TAFE authorities together with a grant of $12 100 from the CTEC, but that the CPSG considered that there was a case for co-operative funding between government authorities and industry in national curriculum ventures. He stated that, with limited government funding, industry and commerce should recognise a responsibility to contribute towards determining the education and training needs of its personnel. Consequently he sought a contribution of $17 200 from the REIA, that is, half the cost of holding the 1985 meetings. He indicated that he would be seeking the other half from Australian licensing authorities. Because of the uncertainty of funding, in March 1985, the convener of the task force informed members that the project was to be deferred. (Seary, 1985c).

Independently of the request for funding, but with full knowledge of the decision to defer, the executive director of the REIA asked the chairman of the CPSG what financial support would be required from that institute. (Lawrence, 1985).

In its report to the September 1985 meeting of the CPSG, the task force indicated that the licensing authorities and the real estate industry had made a provisional commitment of $32 400. The provision was that the task force should endeavour to organise the NCC in subjects (Jagger, 1985b). This required a compromise of its original intentions as the CPSG has seen problems with that such organisation (CPSG, 1985b). The compromise was that the core syllabuses were organised in units rather than subjects and this was accepted by the Licensing Authorities National Conference which contributed $12 000 (Jagger, 1985c).

C.6 Consulting the TAFE officers who were involved with the development and implementation of the real estate NCC

Ten questionnaires were distributed, but returns were received from the representatives of only six authorities. There was no questionnaire returned from New South Wales or Queensland. However, an interview was conducted with the task force member from the former state. As with the other questionnaires, respondents from the different states/territories are identified by letter.

C.6.1 The range of management approaches to NCC development

a) The national task force approach

To the question of the effectiveness of the national task force approach compared with the local development of a real estate curriculum, three respondents considered that the national task force approach was more effective, one (G) was that it was marginally more effective, one (C) that the approach would lead to curriculum products of about the same quality as the normal state/territory curriculum development methods, and one (H) that the approach is less effective than that used by the TAFE authority in developing its own curriculum.

Respondent A commented that he had been influenced in his favourable opinion of the effectiveness of the national task force approach by the success of the task force which had produced the real estate NCC. He made the points that the success of a task force depended heavily on the ability and enthusiasm of its members and that the varying ability and enthusiasm of task force members might account for the varying degrees of success achieved by different task forces. He wondered if teleconferences might be an adequate substitute for task force meetings but, from his own lack of experience of them, was not inclined to pursue the question further.

Respondent E emphasised that his answer was relevant to real estate only and that there may be other disciplines where other methods of management would be preferable. The thrust of his argument was that no generalisation should be made on the basis of a single experience.

Jagger (1987) who was intimately involved in the implementation of the NCC in Queensland was prepared to generalise on the task force approach to management. He considered that it could be highly effective, provided that:

- membership is carefully selected to ensure a relevant and cohesive group;
- proper guidelines for management are established prior to the project; and
- adequate access to the CPSG is available when advice is required.

b) Some options to the task force approach

i) Co-operative project method (Option A, Question 2, Appendix C).

Broadly speaking, respondents considered that this approach would not be as effective as the national task force approach.

ii) Delegation to a TAFE authority (Alternative approach B, Question 2, Appendix C)

The unanimous opinion was that this approach would not be as effective as the national task force approach, and, furthermore, that the approach was not worthy of consideration.

iii) Use of a project officer (Alternative approach C, Question 2, Appendix C).

In contrast with the two preceding case studies, where this approach did receive some support, the unanimous opinion was that this approach would not be as effective as the national task force approach. However one respondent (G) did think that it was worthy of consideration.

c) The preferred option

There was no doubt of the attitude of the respondents to this questionnaire, most of whom were members of the task force. They had been involved in a successful undertaking (Section C.4.11) and would not accept that any other approach than the national task force could be successful. While the warning against generalisation should be noted, respondent A seemed to sum up the general opinion. He did not consider that option A and alternative approach B would produce optimum NCC documents, while the result of using option C would depend heavily on the expertise of the project officer.

d) The technique of curriculum development

The technique used for the development of the real estate NCC was different from that used in the other two case studies. Here DACUM sessions involving 320 real estate practitioners were conducted simultaneously across Australia (Section C.4.1).

C.6.2 The extent of implementation of real estate NCC in all states/territories

a) The fidelity of users in conforming to the pre-specified goals of the curriculum developers

Although, in general, the research, development and diffusion model of curriculum design has been used, it was noted above that 320 people were involved in the DACUM exercise. To this extent the dangers of the curriculum being implemented in a form not intended by the designers should have been lessened. Four of the respondents indicated that more than 75% of the NCC had been implemented within their TAFE authority. One of these (A) indicated that it was intended to implement the NCC in full and that local courses were being rewritten to incorporate it.

The authorities of two respondents (C and E) had not implemented the NCC at all. C commented that it had only just been received. E indicated that it was to be implemented.

Broadly speaking, the proposition that the greater involvement of users leads to greater fidelity of implementation has been justified.

i) Degree of change in form and substance of NCC in transition to the TAFE authority program

In general, moderate change was reported; one respondent (G) reported a high level of change.

Respondent F who reported no change of the NCC in its transition to the state authority program said that the NCC had been entirely suitable for adoption, local content being incorporated in due course. Respondent A who reported minimal change stated that the real estate NCC had been written in a form which facilitated the incorporation of the NCC content into the new courses which were being written in that authority.

The respondent who indicated that there had been a high level of change (H) did not comment further.

ii) Constraints on TAFE authorities causing change in the form and substance of NCC syllabus content products

Only two constraints on TAFE authorities were mentioned and these were related - the uniqueness of state/territory training needs and the specialised nature of the industries which the occupation serves.

Three respondents commented further. A commented that although no major problems had been encountered in incorporating NCC content into local courses, non-core items had to be included to accommodate local practice and legislation. E and H commented that licensing arrangements were a constraint.

iii) Proportion of NCC Syllabus in TAFE authority programs

Four of the respondents indicated that the NCC made up more than 60% of their TAFE authority programs. One (E) stated that it was between 30% and 50%.

b) Course presentation mode

Three respondents (A, E and F) indicated that their authorities presented the courses in a subject sequenced way in stages or years. One respondent (G) indicated that his authority was presenting the course in unitised form (the form in which the NCC has been prepared).

In authority H, the program is arranged to suit the progression which exists within the industry. That is, separate courses are provided for salespersons and managers with one leading to the other.

c) Curriculum materials/resources

Colleges in all TAFE authorities which have real estate classes use locally prepared typed notes, work sheets, check lists, practical aids and models supplemented by lectures and demonstrations. Respondent A noted that the REIA had produced specialised text books which tie in with the teaching objectives of that authority in a number of subjects. In addition to the above materials, authorities E and F use state produced self-paced learning packages in print form supplemented with film, film strip and video. In one case this is because real estate courses are available by external study only.

Authority H uses what it described as nationally developed learning materials. By this was meant resources developed by the REIA.

d) The relation between method of documentation and degree of implementation.

Respondents were virtually equally divided between two options.

- a minimal NCC syllabus documentation with broad course aims and objectives and general content areas listed. TAFE colleges would then be free to interpret the syllabus in light of local needs (the short form). As respondent E put it: "constraints due to over documentation should not be allowed to occur".
- an NCC syllabus rewritten into a local syllabus form by TAFE authority curriculum branches so that minimum interpretation is left to college lecturers. This option was advocated by A who asserted that, as the aim of the NCC is to achieve uniformity on a national basis, the final syllabus should be co-ordinated at as high a level as possible.

e) Monitoring of the implementation of the NCC program

Respondents were unanimous that the implementation phase of NCC-based programs should be monitored to provide feedback to all stakeholders who supported its inception and development. E commented that some might doubt the validity of NCC exercises and, if those doubts are to be allayed, monitoring is essential.

f) Type of monitoring preferred

Given that all respondents were in favour of some sort of monitoring of implementation, they were asked to choose between four options of which they favoured only two. One half would prefer a cooperative, advisory and consultative approach while the other would prefer a supervisory group acting in accordance with firm guidelines. H would see these guidelines as national.

g) Respondent knowledge of the degree of implementation of NCC in other TAFE authorities

Three respondents (F, G and H) claimed a knowledge of the extent of implementation of the NCC in other states/territories. They all considered that it was being implemented in most states/territories.

h) Summary of responses on implementation

Although the real estate NCC has not yet been implemented in every TAFE authority, it is likely that it will be very soon and that, when implemented, it will generally constitute the greater proportion of real estate courses in most authorities. In general, there had been moderate change to the NCC in the transition to the TAFE authority program. These changes were seen to be due to the uniqueness of state/territory training needs and the specialised nature of the real estate industry.

Even though the NCC had been prepared in unit form (section C.4.2), the courses were most often presented in a subject sequenced way in stages or years. Generally, locally produced materials were used, but there is material produced by the REIA available nationally. There was sharp division on the form of documentation preferred. Some would prefer the short form of documentation which allows maximum flexibility while, by contrast, others would prefer a state/territory syllabus which allows minimum flexibility in the colleges.

All favoured monitoring of implementation and there was not as much division on who should do it as there was in other case studies. All favoured a formal monitoring group but respondents were divided on whether it should be nationally or state based. They were also divided as to whether monitoring should be through a cooperative, advisory and consultative approach or a supervisory group acting on firm guidelines. There was a good deal of knowledge in the authorities of the extent of implementation of the real estate NCC across the nation.

C.6.3 The impact NCC has had in the maintenance of standards between colleges and between authorities

a) Monitoring of standards - a strategy for its achievement

Respondents were equally divided on whether there should be a strategy for monitoring the maintenance of NCC standards. A, F and G said yes; C, E and H said no. Those who favoured monitoring of standards considered that it should be done by a TAFE national group. A would favour a group such as described in section A.3.3(a), F would leave the monitoring of standards to the original task force, while G had no comprehensive view. All those who favoured monitoring, favoured a cooperative, advisory consultative approach with a minimum of prescription.

b) Effect of change of form and in substance of NCC products in the transition to the rewritten local syllabus and classroom program on the quality of the curriculum product.

All respondents agreed that this transition did not affect the quality of the curriculum product. Respondent A reiterated a fear expressed by another respondent (E) that his response which was particularly directed to the real estate NCC would be generalised. He noted that the real estate NCC document had been produced in a form which allowed it to be transcribed verbatim in most instances, from the core document to the local syllabus document. He observed that this may not be applicable to other NCC documents. Respondent F observed that the external studies packages which had been developed from the NCC documentation were an example of high fidelity of transition and therefore there was no decrease in quality.

c) Effectiveness of a nationally determined assessment strategy in maintaining NCC standards

Most respondents considered that such a strategy would not be effective in maintaining standards. This may explain why the aim to produce appropriate student progress assessment systems for the national core component of each separate real estate course was not followed through (section C.4.5). Only one of those who favoured a nationally determined assessment strategy (F) would moderate that strategy.

d) **Establishment of a nationally determined student assessment item bank**

Only three respondents (A, F and G) considered that the establishment of a nationally determined student assessment item bank would be a positive and useful strategy in helping to maintain NCC standards. Of these, two (A and F) would include student practical tests and assessable home assignments in the assessment item bank. The general lack of enthusiasm for a nationally determined student assessment bank meant that the question on frequency of review was irrelevant.

e) Exchange of examination papers

Respondents were divided on whether an exchange of examination papers and a random selection of student scripts among TAFE colleges on a national scale would be a positive and useful strategy in assisting to maintain NCC standards.

f) Use of industrial needs analysis

Of the respondents (five) who answered this question, all but one (E) agreed that the NCC project should be preceded by a nationally determined industrial training needs analysis to ensure that the NCC is responsive and relevant to existing and potential training needs. This was in fact the first task undertaken by the real estate NCC task force.

g) Constraints on maintenance of standards

One respondent (F) considered that the course had not been implemented sufficiently to comment on constraints on standards. Of the constraints suggested in the questionnaire, three were identified as affecting, presumably adversely, the maintenance of standards. They were:

- the need for some teachers (particularly part-time) to update some areas of knowledge and skill;
- the lack of suitable learning materials such as self-paced learning packages and self-assessment schemes; and
- the lack of suitable moderately priced text books. Respondent A commented that students vigorously resist the purchase of high-priced volumes.

Respondent A identified the parochial attitudes of individual state/territory TAFE representatives as not helping the maintenance of the standard of NCCs at a national level. He did not elaborate.

h) Summary of responses on the maintenance of standards

In contrast to unanimous agreement that monitoring of implementation was required, there was no agreement on whether there was a need to monitor the maintenance of standards. In fact, when the responses to the propositions on some means of monitoring standards are considered, the general impression is that such monitoring is opposed. There was no strong support for a nationally determined assessment strategy, a nationally determined student assessment item bank or an exchange of examination papers.

It was considered that any change in form of the substance of the NCC in the transition to the local syllabus and classroom program did not affect the quality of the curriculum product and that, if the NCC is to be responsive and relevant to existing and potential training needs, it should be preceded by a nationally determined training needs analysis.

It was agreed that standards have been affected adversely by lack of up-to-date knowledge and skill among teachers (particularly part-time), of suitable learning materials and moderately priced text books.

C.6.4 The cost-effectiveness of developing and implementing core curricula in real estate

a) The balancing of benefits and costs

In December 1984 the convening TAFE authority for the real estate NCC (Queensland) prepared an estimate of what the project had cost to that time. This was:

TAFEC	$12 100
Convening state authority	5 160
Other participating TAFE authorities	57 782
Industry representatives	10 265
Total	85 307

This estimate can be considered very conservative, since for example, the clerical and office costs and the direct salary costs of the convener to the convening state authority were shown as unknown. Also an estimate was made that $42 400 was still needed in 1985. This was being sought from TAFEC, the real estate institutes and the licensing authorities in Australia (Seary, 1985b). In all, the costs of the project exceeded $127 000.

The cost of over $127 000 compares with the allocated funds of $20 100 (Appendix E). That is, the cost to TAFE authorities and industry exceeded by a multiple of five the TAFEC allocation. When the contribution of industry is taken into account, this was broadly consistent with the statement (section 4.4) that a contribution of approximately $4 was made by TAFE authorities for every $1 contributed by TAFEC.

As an estimate of cost effectiveness, it can be said that, for a cost of somewhat more than $127 000, NCC syllabuses were produced for eight vocations in real estate together with lists of available learning resources. A basis for portability of qualifications between the states/territories was also provided.

The fact that the real estate NCC had cost more than $127,000 was not pointed out to respondents when they were asked whether they considered the benefits to students, teachers and non-TAFE stakeholders justified the cost of developing the NCC. Two respondents (C and H) did not think that the cost was justified. Of these, C considered that the local development of a real estate curriculum would have been cheaper and equally effective. Respondent F considered that the cost was a secondary consideration. In his opinion, only an NCP could have identified and disseminated the skills needed across the nation.

b) The cost-effectiveness of approaches other than the task force model

All of the respondents, but two (C and F), considered that approaches other than the traditional task force models should be considered by the CPSG as means of producing NCC more cost-effectively. Respondents E were careful to point out that their response was directed to real estate only. They could envisage other disciplines where other approaches would be preferred. Judgement could only be made in a total context which would take account of existing materials, established formal and informal relationships between the TAFE authorities and political parameters - to name only three.

However, only three of those who considered other approaches should be considered, nominated one of the other options as possibly more effective than the task force model. A and H favoured the cooperative project method, while G favoured the use of a project officer.

c) Summary of responses on cost-effectiveness

Generally respondents considered that the cost of developing the real estate NCC was justified in the benefits flowing to students, teachers and non-TAFE stakeholders. There was strong opinion that other approaches might be more cost-effective, but no consensus on what these approaches might be.

C.6.5 The benefits of NCC to students and teachers

Among the aims of the task force were to:

- produce appropriate student progress assessment systems for the national core component of each separate real estate course;
- develop and exchange teaching-learning resources;
- develop external studies courses in real estate parallel to the proposed NCC; and
- provide for portability of qualifications between the states.

That is, the task force set to achieve a number of benefits for both students and teachers. Some progress was made on three of these. The NCC document (TAFE, Queensland, 1986) contained a list of resources suitable for Australian market conditions and an example of a reciprocity grid. The CPSG did not act on a recommendation to develop national correspondence texts based on the NCC document.

It was in this context that responses were sought on the benefits to students and teachers of the real estate NCC.

a) Quality of terminal competencies of NCC course graduates - a student benefit

All respondents, but one (C), considered that the terminal competencies acquired by graduates of the real estate NCC were the better suited to meet the current and perceived commercial work tasks than those acquired by those trained under locally developed programs. The principal reasons given by respondents for these opinions were that the NCC was the result of a cross-fertilisation of ideas and opinions based on a reasonably high degree of common content and had been prefaced by an occupational analysis. Representation of the real estate industry on the NCC was not seen as important as those two. Perhaps this was because there were four representatives on the task force and there was no appreciation of the effects a lack of representation might have had.

b) Graduate mobility - a student benefit.

In the original justification for the project Lawrence (1983) (section C.2) noted that the real estate industry was changing from small independent firms operating in local areas to large marketing and franchise organisations, and that even small real estate agents were moving from state to state. It was argued that a national curriculum was a prerequisite for achieving reciprocal licensing arrangements. In this context, only one respondent (A) considered that mobility of graduates was highly relevant to the real estate industry. The others considered that it was only marginally relevant.

c) The benefits to lecturers:

Respondents were asked to assess the relative benefits to lecturers. The factors as rated, in order of perceived benefit, were:

- staff development on a national scale for participants in task forces and working parties due to exchange of ideas;
- a more industrially/occupationally relevant course due to the national scope of the NCC based program; and
- a more enhanced TAFE image, both state and national, due to the higher expectations of the real estate industry for TAFE generally.

The other possible benefits to lecturers of the real estate NCC did not really rate with the respondents.

d) General benefits to students.

Respondents were asked to assess the relative benefits to students. One respondent (F) considered that it was too early to make an assessment and therefore did not comment. Of those respondents who made assessments, only one factor emerged as highly beneficial. That was that the NCC provided graduates and students with more relevant and effective terminal competencies than those provided through earlier courses.

The portability of graduate qualifications and the mobility of students were seen to be some benefit. With regard to the latter of these, respondent A commented that students are readily able to identify the credits they will get in transferring to a course in another state/territory and correspondingly, the TAFE institution in state/territory to which the student transfers is able to decide more effectively what exemptions can be granted and hence what further studies a student needs to undertake to order to qualify for a licence. Respondent G considered that mobility of students across state/territories was only a matter of concern in border areas.

e) The most important benefits

For lecturers, the most important benefit was the staff development that task force members and working parties received by being able to exchange ideas on a national scale.

For students the most important benefit was perceived to be the fact that graduates of the NCC course acquired better terminal competencies than they did when trained under locally developed programs.

C.6.6 The opinions of bodies outside TAFE

The questionnaires in the case study were directed to TAFE officers who had been concerned with the development and/or implementation of the real estate NCC. Their views on the opinions of bodies outside TAFE were necessarily secondhand and so it was decided to discuss views on the real estate NCC with representatives of professional associations, employers and employees of the real estate industry. These discussions were held in Queensland since the TAFE authority in that state had convened the task force. A very general interview schedule (Appendix E) was used for this purpose

a) General awareness of the real estate industry of NCC course.

Respondents to the questionnaire were almost unanimous in the opinion that employers in the real estate industry did not know that their employees were being trained by an NCC-based course. It was difficult to judge from discussions with people in the industry whether this judgement was justified as those spoken to were involved in the preparation of the Queensland program. However the response received was that people in the industry did know about the NCC course and moreover thought that it was a good idea, particularly as a means of upgrading standards of practice. The Training Development Officer of the Real Estate Institute of Queensland (REIQ) commented that the REIA was acting as an informal ambassador for the NCC and commented on the need for the development of an information bank (Griffiths, 1987). This was discussed in section C.4.7.

b) Extent of employer expectation of implementation of NCC-based course

All respondents to the questionnaire (except E) considered that employers expected the NCC to be implemented totally. This question was not asked of industry representatives but it can be inferred from the answers to the questions gauging the benefits of a real estate NCC that they would wish full implementation.

Jagger and Trowbridge (1987) reflected a view that employers would be so dedicated to the idea of complete implementation of the NCC that they would like national examinations. While they perhaps would not have gone as far as that, they saw a case for a national bank of case studies. This was discussed in section C.4.7.

c) Views of employers on the quality and value of NCC

The employer representatives were asked why they considered a national course should be better than a state based course and if, in general terms, they considered the real estate NCC worthwhile.

Jagger and Trowbridge (1987) saw two benefits in a national real estate course. The first was that there could be quicker response in adjusting content to changes in national trends and that resources could be shared in those areas for which there is relatively little demand, such as time sharing, property management and high rise. A real estate salesperson who was on the Queensland state curriculum committee commented that, in her opinion, the NCC overcame interstate jealousies on the relative merits of TAFE authority courses.

With regard to the value of the NCC to employers, there was general agreement that it was worthwhile. One person commented that implementation of the course would simplify things and bemoaned the fact that 'everyone' wanted to meddle with it. Griffiths (1987) commented that the REIQ supported the NCC to the extent that it was restructuring its own internal courses to correspond with the NCC.

d) General benefits to the real estate industry of the NCC

Generally, respondents to the questionnaire considered that employers in the real estate industry recognised positive benefits to their industry stemming from the implementation of the NCC. One of those who considered that employers did not recognise positive benefits (A) commented that employers needed to be educated on these benefits.

Respondents to the questionnaire were asked to assess the relative benefits to employers. The factors as rated, in order of perceived benefit, were

- more effective student/graduate terminal competencies to perform the current work tasks than those stemming from earlier courses;

- a form of training ensuring that the graduate has is better prepared for adjusting to technological changes in the industry; and

- the development of work attitudes leading to improvement in job satisfaction.

An improved portability of skills was considered to be of little benefit to employers.

Representatives of industry put forward the following advantages for employers in general. Relative importance is not implied in the order of listing.

i) Portability of qualifications

The opportunity to move between states and have qualifications recognised was seen as important for some people. For example, Summerville (1987) commented that a lot of people in the real estate industry on the Gold Coast came from other states/territories and that a standard education across the nation would make this easier.

Whether this opinion is justifiable, is a matter of judgement. Only two of those interviewed had employed or worked with anyone from another state/territory and in each case only one person was involved. In neither case had the qualification from the other state/territory been acceptable and each had to do another examination.

The importance of portability of qualifications in border areas was commented upon by respondent G. This problem was also referred to by Griffiths (1987) who said that real estate agents in the Gold Coast-Tweed Heads border area of Queensland-New South Wales had to operate under different legislation and to be licensed in both states, although New South Wales law allowed the holder of a Queensland licence to operate up to 65 kilometres south of the Queensland border.

ii) Improvement in ethical standards of salespersons

Jagger and Trowbridge made the point that the real estate market is becoming more complicated and this is leading to demands for greater ethical standards than has been expected in the past. The NCC has provided a starting point for the development of these higher standards.

iii) Maintenance of standards

Griffiths (1987) saw the NCC as establishing a uniformly acceptable standard of real estate education across Australia. This is in line with the policy of the REIA (Section C.1).

e) Effectiveness feedback from industry to TAFE

Respondents were asked to rate the relative effectiveness of a number of channels of feedback from industry to TAFE. The only factor perceived to be of real importance was the interchange of information between TAFE and industry within TAFE advisory committees and the operation of state/territory licensing authorities. However respondent A considered that ongoing, informal interchange arising from TAFE teachers visiting industry and vice versa was an effective channel of feedback from industry to TAFE. He commented that the participation of TAFE teachers in the activities of the real estate industry serves to highlight the current courses and is effective in promoting their recognition and acceptance.

f) Views of licensing and professional bodies on the real estate NCC

There is a professional and a licensing body in each state/territory. For example, in South Australia these bodies are the Real Estate Institute of SA and the Land Agents, Brokers and Valuers Board respectively. These bodies from each state/territory make up the REIA and the Conference of Licensing Authorities (section C.3). The attitude each of those bodies to the NCC can be gauged by the fact that each contributed to its development (TAFE, Queensland, 1986).

Even so, the development of the NCC has not overcome licensing problems. Griffths (1987) commented that these problems are exacerbated by the boards. He commented that an intention to allow reciprocity of licensing in Queensland had not been followed through. However Jagger and Trowbridge (1987) commented that negotiations on reciprocity in licensing between Victoria, Queensland, Tasmania and South Australia were proceeding.

The effectiveness of preparing an NCC in an occupation where there is a wide diversity of practice and licensing requirements across the states/territories was raised with those interviewed. Jagger and Trowbridge (1987) conceded the fact that there were differences in law in areas such as consumer protection and town planning but maintained that it was still possible to develop a course based on general principles.

Griffiths (1987) commented that real estate courses could be broken down into three streams. Two of these, management and marketing, are common areas across Australia while in the third stream, legal, the traditional common law applies throughout Australia leaving the only differences in the effects of local legislation. For example, in Queensland this latter aspect made up only 100-150 hours of a 1100 hour course. What was originally thought to be a difficult problem turned out to be relatively straightforward.

ii) Industry attitudes to the nature of the courses.

The attitude of employees in the real estate industry in Queensland to the courses was described by one employee as 'resentful'. Employees resented the fact that the previous situation where qualifications were not required by real estate salespeople had changed.

For example the REIQ which has implemented a basic sales course (superstart) expects to upgrade that course to comply with the NCC. It intends to continue to offer the course in parallel with TAFE and to seek accreditation from the appropriate authorities.

In other parts of the real estate industry, there is quite a different attitude to that discussed above. There is such an enthusiasm for the courses and the level at which they might be offered that there is a real danger of qualification being demanded at an unnecessarily high level. The view was expressed that the NCC gives the real estate program the opportunity of being lifted to a profession. This view is reinforced by the development of an associate diploma course in Queensland even though such a course is not needed at the present to obtain a licence and by plans in NSW to raise the level to a diploma or a degree (Mellor, 1987).

h) Summary of opinions of bodies outside TAFE

People working in the real estate industry know of the NCC and generally think that it is a good idea. They expect the course to be implemented in full and national examinations to be conducted. They considered that the principal benefits of the NCC are greater portability of qualifications and an improvement in the ethical standards in the profession. It was expected the implementation of the NCC would overcome licensing problems between the states/territories but so far this has not eventuated.

C.6.7 The role of the CPSG in the development and implementation of the real estate NCC

a) Extent of CPSG involvement

Respondents were asked whether the CPSG should be involved across the full spectrum of NCC activity (that is planning, designing and development to implementation and evaluation). All respondents, but G, considered that it should not be. No respondent gave any reason for their opposition.

b) Involvement of CPSG in some form of monitoring of NCC implementation in all TAFE authorities

Respondents were divided on this issue. The majority thought that the CPSG should be involved in some sort of monitoring, but two (C and E) were opposed.

c) Criteria for selection of projects

Respondents were unanimous that the six criteria for the selection of projects agreed by the CPSG (section 3.7.2) should be considered as guidelines only.

d) Effect of CPSG on the development and implementation of the real estate NCC

Respondents were asked to rate the relative importance of a number of possible effects that the CPSG had evinced on the development and implementation of the real estate NCC. The respondents from authority E did not rate the effects. They did not consider themselves sufficiently well-informed of CPSG activities to be able to comment objectively.

There were only two effects which were rated as important by the other respondents. They were:

- the task force had received the benefit of a sound even-handed management which took into consideration the most effective distribution of the scarce resources available to TAFE;
- the CPSG had produced a positive improvement in the quality of NCC products due to the input of experienced senior curriculum officers.

In fact, to some extent, respondents dismissed the role of the CPSG in the development and implementation of the real estate NCC. Respondent E said that the CPSG had appeared to have taken a laissez faire role in the real estate NCC, and respondent G said that, as far as he could see, the CPSG had played a negligible role.

C.6.8 The responses to the questionnaires in overview

The outcomes of the questionnaires can be summed up in the following conclusions.

a) It was expected that, by the time the NCC course in real estate had been fully considered by the TAFE authorities, it would already be implemented to a fairly large degree. People working in the real estate industry expect it to be implemented in full.

b) There has been moderate change to the NCC in its transition to the TAFE authority program. These changes were seen to be due to the uniqueness of state/territory training needs and the specialised nature of the real estate industry.

c) Monitoring of implementation is considered necessary, but there was division of opinion on whether such monitoring should be nationally or state based.

d) Monitoring of course standards is not supported by TAFE officers, nor is there support for a nationally determined assessment strategy, a nationally determined student assessment item bank or an exchange for examination papers.

e) Representatives of the industry tend to favour national examinations and national item banks such as case studies.

f) The development of an NCC should be preceded by a nationally determined industrial training needs analysis.

g) Standards had been affected adversely by lack of up-to-date knowledge and skill among teachers, of suitable learning materials and of moderately priced text books.

h) The cost of developing the real estate NCC was justified by the benefits flowing to students, teachers and non-TAFE stakeholders.

i) The most important benefit of the real estate NCC to lecturers was the staff development, task force members received by being able to exchange ideas on a national scale.

j) The most important benefit for students was the fact that graduates of the NCC course acquired better terminal competencies than they did when trained under locally developed programs.

k) People working in the real estate industry consider that greater portability of qualifications and improved ethical standards in the profession are the greatest benefits of the real estate NCC.

l) The CPSG should not be involved in all phases of an NCC from planning through to evaluation.

m) The criteria for the selection of projects should be considered as guidelines only.

C.7. A note of appreciation

Jagger (1987) commented that the success of the real estate NCC project has always depended largely on a successful working relationship between TAFE, the real estate industry and the licensing authorities. This working relationship was developed in what could have been a difficult situation by a constructive and professional approach to the problems by all parties.

INTERVIEWING INSTRUMENT

The intention of this instrument is to allow respondents the opportunity to profer information to the project officer. The approach is general and is designed to obtain information which indicates the extent of the respondents knowledge of national curriculum projects, particularly national core curricula (N.C.C) and the degree of implementation of national curriculum elements by the State/Territory study area program. The instrument also seeks opinions of a range of TAFE respondents on a number of aspects of national curriculum activity which the seven aims of the evaluation project addresses. This is not a structured questionnaire as such, but is to be used as a check list by the project officer when engaged in general discussion with the respondents. The instrument provides for general responses relating to national curriculum development and will form a base for more specific questionnaires for eliciting information on the case studies.

QUESTIONS

1. What is the extent of your knowledge of national curriculum projects?

2. From your understanding of national curriculum projects, including national core do you consider them to be worthwhile? Would you like to expand on your answer?

3. With which TAFE national project are you most familiar?

4. Would you comment on your involvement in the TAFE national project which you consider to be most familiar to you?

5. Would you briefly outline what you see as the main benefits to your TAFE Authority which arise from the implementation of national core curricula?

6. What are your views on the suitability of the task force approach to the design, planning and development of N.C.C.?

7. National core curricula projects are only one aspect of national curriculum activity, in your opinion what proportion of national curriculum activity should be devoted to N.C.C.?

INFORMATION RELATING TO PROJECT AIM NO.1

8. What approaches were adopted to develop the TAFE national core curricula with which you are most familiar?

9. In some countries, e.g. United States of America, national recognition and accreditation of course qualifications are achieved by registration with regional authorities. These courses often have a points system built into their structures as a strategy to assist the mobility of students.

In your opinion do you consider that:
(a) national registration of courses would achieve national recognition of qualification and
(b) that a points system for the mobility of students across the nation is a worthwhile strategy,
(c) that the adoption of (a) and (b) might be a viable option to the N.C.C. model?

10. (a) Do you consider that the task force approach to the development of N.C.C. produces higher quality curriculum products, and processes than by the earlier state development methods?
(b) If you think it does, are the administrative and organisational costs too high to warrant its continued use?
(c) If you consider (b) to be too costly, what modifications (variations) would you suggest to achieve better cost effectiveness?

INFORMATION RELATING TO PROJECT AIM NO. 2

11. Have TAFE national core curricula (or other) been implemented by your TAFE Authority, and if so, of how many are you aware.

12. National core curriculum products (such as content) often undergo changes in character and form as they move, through the stages from the national core syllabus document to the State/Territory syllabus, to the college study area program and finally to the point of delivery. Do you consider that such changes vary the quality of the national core curriculum product? Can you offer any examples of such variations?

13. To what extent do you consider curriculum elements based on national core curriculum syllabus have been implemented in the relevant colleges in your TAFE Authority?

14. Do you have any knowledge as to the extent N.C.C. products have been implemented in the other relevant TAFE Authorities

15. In your opinion do you think that national core curricula syllabi content completely covers all the relevant areas of technical education and training needs within your State/Territory?

16. What proportion of the national core curriculum products (or other elements) as expressed in a N.C.C. syllabus document, should feature in State/Territory study area syllabus to warrant the cost of developing the N.C.C.?

17. In the development of a national core curriculum, what form of curriculum syllabus documentation should the C.P.S.G. expect from the task force working on the development of the national core curriculum in order to enhance the implementation by the TAFE Authority?

18. In your opinion, to what degree does the type of national core curricula syllabus documentation affect the implementation of the N.C.C. through the State/Territory study area syllabus?

19. Do you consider that in most study areas covered by N.C.C. there is a greater degree of commonness in the content of TAFE courses across Australia than is spelt out in a national core syllabus document?

20. Do you consider that the monitoring of the implementation of national core curricula in the States/Territories should be a matter of concern for a TAFE national group?

21. If your response to number 20 above is no, do you consider that there should be formal mechanisms for the monitoring of N.C.C. courses in your Authority? If your answer to the above is yes what form should such monitoring mechanisms take?

22. Do you consider that the C.P.S.G. should take an active role in the implementation of N.C.C. e.g. non prescriptive guidelines?

23. If your answer to number 22 above is no, is there an implementation role for individual C.P.S.G. members in their own TAFE Authority (not withstanding that administrative structures in some instances may militate against it). If your answer to this question is yes, how do you think this involvement in the implementation phase by the C.P.S.G. representative should be effected?

24. In your opinion what are some of the constraints within a TAFE Authority which may affect the implementation of a national core curriculum?

Would you care to comment on the following:

- availability of capital equipment
- the updating of teaching expertise
- variations in legislation among the States/Territories
- satisfaction with the status quo

25. To what extent do you consider that an awareness of the influence of a national core curriculum on a State/Terrritory TAFE course by teachers is important?

INFORMATION RELATING TO PROJECT AIM NO. 3 (Maintenance of course standards)

26. Has the implementation of national curriculum based programs improved the quality of the curriculum products and processes vis a vis the earlier locally developed course in the following areas:
    - the course's relevance to existing industrial situations,
    - the course's impact on the quality of learning materials,
    - the course's impact on teaching/learning methodologies in the effective delivery of the program?

27. Would you like to comment on how you see the maintenance of course standards being achieved:
    - in your TAFE Authority
    - on a national basis

28. What are your opinions on maintenance of standards through the moderation of assessment strategies?
    - in your TAFE Authority
    - on a national basis

29. In some countries and at several levels of education, (e.g. United Kingdom), examination papers are exchanged among relevant teaching institutions on a national basis, and/or regional basis along with examples of student responses (randomly selected). What is your opinion on the possibility of instituting a similar strategy which might improve the maintenance of N.C.C. based courses across Australian TAFE?

30. In your opinion are all the relevant TAFE colleges in your TAFE Authority equipped with the material and human resources to fully implement all national core curricula based courses? If the answer is no, how many of the relevant colleges are fully equipped to implement the total N.C.C.?

31. To what extent do you consider that the lack of resource might change the form and character of some national core curriculum products?

32. Do you consider that the modifications to some N.C.C. products, as expressed in the local course program, seriously affects the maintenance of the standards expected by the N.C.C. designers and producers?

33. Would you care to comment on the formal mechanisms for the maintenance of all course standards which operate in your TAFE Authority, including those based on N.C.C?

34. Do you consider that the accreditation and registration of all TAFE vocational courses over a certain number of hours duration by a national body such as A.C.T.A., would give sufficient weight for the national acceptance of these TAFE course standards? If the above strategy was adopted would such a national acceptance be a viable option to the development of national core curricula?

35. In your opinion should the monitoring of the maintenance of N.C.C. based courses standards in all relevant TAFE Authorities be a matter of concern for a national TAFE group?

36. Do you know of any instances where the national development of assessment item banks was a consequence of an N.C.C. development?

37. Do you consider the establishment of assessment item banks to be a positive and enhancing strategy for the maintenance of N.C.C. based course standards across all relevant TAFE Authorities?

38. If you consider that assessment item banks are of value in the maintenance of N.C.C. based TAFE courses, would you include student projects and assignments as assessment items in the bank?

39. It is generally accepted that all TAFE vocational courses, including N.C.C. should match the expectations of employers in terms of student and graduate competencies in the workplace and that such standards will be sustained. Therefore should all TAFE National Core curricula projects be prefaced by nationally spread Industrial/Occupational surveys to uncover not only relevant course content, but standards of knowledge and skill applications.

INFORMATION RELATING TO PROJECT AIM NO. 4 (cost effects)

40. There are costs to TAFE Authorities when they become involved in national curricula projects, e.g. salaries, travel and accomodation, printing etc, would you care to discuss this aspect of N.C.C. development in terms of visible and hidden costs?

41. To what extent are these costs reduced by the TAFEC 'Designated Grants'?

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42. Do you know of instances where funds for the development of N.C.C. came from other sources.

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43. If your TAFE Authority decided not to participate in national or interstate curriculum activity and developed the same study area locally, would the development costs be higher or lower when compared with national or interstate co-operative curriculum venture and would the curriculum quality be comparable.

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44. In your opinion have there been occasions when your TAFE Authority's participation in national curriculum projects may have distorted curriculum development priorities within the Authority?

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45. Do you consider that the development and implementation of national core curricula have justified the cost?

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46. Do you consider that the development and implementation of N.C.C. has resulted in any savings to your TAFE Authority when compared with local curriculum development costs.

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47. If TAFE funding for national curriculum projects through 'Designated Grants' were discontinued, do you think your TAFE Authority would continue to participate in such projects?

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48. If fairly large costs were involved in providing additional facilities such as the upgrading of buildings and the purchase of additional capital equipment to implement a national core curriculum in your Authority's relevant teaching institutions, do you consider that the benefits which are seen to flow from N.C.C. implementation would warrant the expense?

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49. During the exploratory stage of the development of a national core curriculum a comparative analysis of the existing study area courses of the TAFE Authorities is carried out. This exercise often shows a high level of commonness in course content, although there are differences in emphases and applications due to local causes. How much of the common content revealed in the analysis should be included in the N.C.C. before it is considered to be worth the costs involved?

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50. Large corporations and companies which operate on a national or interstate basis such as B.H.P. in their steel making operations, have found it necessary to establish training centres to train their professional, para-professional and sometimes trade level personnel to cope with changes in technology, which are occurring at their installations across the nation. The rationale of such projects is to provide highly trained and readily mobile staff able to fit into comparable work situations at all relevant locations. Do you consider that the development of TAFE national core curricula in selected areas of study, would reduce the pressure on nation wide and inter state companies to establish private training centres and would the national interest be served despite the cost?

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51. Do you consider that another option for TAFE to meet such nationally important technical education as outlined in No. 52, above, might be the extension of such specialised technical education institutions as the Maritime College in Tasmania, which caters for a nationally spread student clientele. Although the numbers involved may be relatively small when compared with the numbers involved in other TAFE vocational courses, would the costs be warranted in the national interest?

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52. In respect to the above do you consider that joint-venturing between TAFE in the relevant State/Territories and the private enterprises concerned, may be a cost effective strategy?

INFORMATION RELATING TO PROJECT AIM NO. 5 (benefits to teachers and students)

53. Do you consider that TAFE courses based on N.C.C. to be more effective in achieving course aims and objectives than the earlier locally developed courses? Please consider the following areas:

    - do you consider student terminal competencies are better suited to perform the current industrial tasks in the workplace?

    - do you consider nationally based programs to be more responsive to the technology changes in the industries concerned, and can you offer any examples?

    - do you think that employers are aware that a number of current vocational courses are based on national core curricula?,

    - If you consider that relevant employers are aware of the N.C.C. influence, do they recognise positive benefits from the implementation of such courses vis a vis the earlier locally developed courses?

    How does your TAFE Authority formally and informally receive employer feed back on perceived benefits from N.C.C. based vocational courses?

    - do you consider that State/TerritoryN.C.C. based vocational courses improves the mobility opportunities for current students?

- do you think that the mobility of vocational course students is an important issue for the development of N.C.C?,

- do you consider vocational course graduate mobility to be an important issue in the development of N.C.C?,

- which occupations receiving technical education and training based on N.C.C., do you consider would benefit most from the portability of the qualifications gained from such vocational courses?

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54. What benefits to TAFE teachers do you see arising from the implementation of courses based on N.C.C.?

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55. Do you consider that course structures, content, guidelines for teaching methodologies, assessment guides and other curriculum products and processes developed for national core curricula, have provided an accepted pattern (model) which has been followed to any degree in State/Territory designed relevant courses. If you consider that this has happened can you offer examples, and if you consider it has not occurred can you suggest the reason(s)?

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56. Do you consider that as a consequence of the development of N.C.C., TAFE Authority curriculum managers have a better tool for planning, designing and developing curricula?

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57. In your opinion has the implementation of N.C.C. made State/Territory vocational qualifications more acceptable across Australia to such bodies as registration and licensing committees of the relevant regulatory Authorities, the Industrial training commissions, and non statutory bodies such as employer associations and trade unions?

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58. In your opinion what additional facilities are available to students as a consequence of the development and implementation of TAFE national core curricula when compared with the earlier locally developed programs? Would you comment on the benefits to students which you see as a consequence of N.C.C by considering the following areas, perhaps you may wish to give some concrete examples?

- nationally accepted student texts,

- nationally accepted student self paced learning schemes,

- nationally applicable self evaluation, such as computer assisted self assesment,

- nationally endorsed student projects and work assignments,

- nationally accepted modules of core integrated learning with video support,

- course structures with built in study area options to provide for specialisation after attaining the occupational base of knowledge and skills which are largely common nationally.

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59. Do you consider staff development to be an important benefit to teachers as a consequence of their participation in the development and/or implementation of national core curricula?

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60. Can you give examples of any formal staff development which occurred in your Authority (or on a national basis) to prepare staff for the implementation of N.C.C.

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61. What are your views on informal teacher net-works which may arise as a consequence of involvement in the development and/or implementation of N.C.C.?

INFORMATION RELATING TO PROJECT AIM NO. 6 (i.e. to gather opinions of industry and commerce)

62. In your view, to what extent do non TAFE bodies such as State/Territory industrial and commercial training authorities, employer associations, registration and licensing committees, employing companies and trade unions, expect N.C.C. to be implemented by TAFE Authorities?

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63. In your view is technical education and training expectations feedback best achieved through TAFE Authority/Statutory industrial training authority joint curriculum advisory committees or through formal and informal networks involving TAFE colleges and relevant industries? Perhaps you could comment on official avenues of feedback?

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64. Do you consider that there is a higher level of awareness and expectation of benefits from the N.C.C. among those industries/occupations whose trades people must be registered and licensed to operate them among those industries not regulated?

INFORMATION RELATING TO PROJECT AIM NO. 7 (Role of C.P.S.G.)

65. What are you views on the role of the C.P.S.G.?

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66. Do you think the role of the C.P.S.G. should be evolving rather than fixed. If you consider the role should be flexible, how do you see it changing over time?

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67. Up to the present time the C.P.S.G. has played a somewhat reactive role in that the group has received national curriculum project proposals, appraised them for their potential value to all relevant TAFE Authorities and set terms of reference for the development of the projects. In your opinion should the C.P.S.G. be less reactive by identifying national curriculum priorities, which in their view relate to national interest issues and advise the Conference of TAFE Directors accordingly?

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68. In your opinion should the C.P.S.G. be involved across the full spectrum of national curriculum activity, i.e. from the planning to the implementation phase?

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69. To what extent should the C.P.S.G. be involved in the monitoring of national core curricula based courses during and after implementation in the relevant TAFE Authorities?

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70. In your opinion what selection criteria should the C.P.S.G. use when selecting national curriculum projects?

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71. No positive rationale, in the form of a policy statement, has been identified for the development of N.C.C. by the C.P.S.G., apart from a list of N.C.C. selection criteria. If there is no rationale policy statement, should there be one, and should the rationale dictate the N.C.C. selection criteria?

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72. To what extent do you consider State/Territory courses have benefited from the involvement of the C.P.S.G. in the selection and development of N.C.C.?

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73. Since its inception in 1981-2, the C.P.S.G. has involved itself in a large number of national curricula activites.

Would you care to comment on the above statement?

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74. Do you consider that the liaison between the C.P.S.G. and D.E.I.R. should be strengthened with the aim of developing trade manuals to the stage of being nationally accepted supplementary learning materials for TAFE vocational courses?

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75. Do you consider it to be a responsibility of the C.P.S.G. to respond directly to the expressed technical education/training needs of industry and commerce?

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76. If your answer to question 75 above is yes, in your opinion what new strategies need to be developed so that the C.P.S.G. could respond immediately to the technical education/training needs of Industry/Commerce through the selection and development of national curriculum projects, and in particular N.C.C.?

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77. In your opinion should the C.P.S.G. insist on State/Territory industrial/occupational surveys as a starting point in the identification of industrial/commercial technical education and training needs, before applying the other selection criteria to national curriculum projects? Would you like to briefly expand on this issue?

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78. Do you consider that the C.P.S.G. should take note of the degree of commonness in courses among TAFE Authorities, and should the degree of commonness of course content be a selection criterion?

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79. Do you consider that the C.P.S.G. has consciously taken into account the technical education /training needs of corporations and companies which operate on an interstate or national basis. If the group has not, should it and should this be a criterion for the selection of national curriculum projects (N.C.C. in particular)?

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80. With respect to the above question (81), do you consider that the N.C.C. developed and implemented to the present time has improved the mobility of graduates of these nationally developed courses?

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TAFE
TAFE NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT LTD
296 Payneham Road, Payneham, South Australia 5070, Australia. Phone (08) 42 7905
(Incorporated in South Australia)

Our Reference: HP36/JB/ah

1st September, 1986

Re: TAFE National Centre for Research and Development Project: "An Investigation into the Implementation of National Core Curricula"

The above project has been commissioned by the Conference of TAFE Directors and has seven specific aims, which are enclosed for your information. Our aim in writing to you is to seek your assistance in the conduct of the project by obtaining your views and advice on a range of issues which directly relate to the aims of the investigation. To this end, both Kevin Parkinson and I would appreciate speaking with you when you visit Adelaide to attend the C.P.S.G. meeting scheduled for Wednesday September 24. I believe it is customary for C.P.S.G. members to arrive in Adelaide the day before the schedule C.P.S.G. meeting, on this occasion Tuesday September 23. If it is possible, and if you are in agreement with our proposal to interview members of the C.P.S.G., it would suit our plan if you would arrive earlier than usual on the Tuesday, say in the morning or early afternoon. Both Kevin and I would share the interviewing sessions, each of which would be in excess of one hour for each person, and we are prepared if need be, to continue interviewing in the evening at your place of accommodation.

The interviewing schedule has been prepared following discussions with senior TAFE and Training officers from New South Wales and South Australia, where the main issues relating to the aims of the project were identified. These were those which the TAFE Directors would like to see addressed. Maybe from our interviews other relevant issues may be uncovered and opinions offered as to their treatment in the investigation. The interviewing schedule is enclosed for your information. You will notice that the questions are couched in general terms.

Should you care to write brief responses to all or some of the questions, it may assist you during our interview. Both Kevin and I would appreciate such brief written commentary to check our recording of your verbal responses to the questions. You may wish to discuss only certain aspects of the interviewing schedule, that also is your decision.

Perhaps if you would telephone either Kevin or myself at the TAFE National Centre (Mondays - Wednesday noon) and give your response to the above proposal, we could plan accordingly. We thank you in anticipation of your assistance in this matter.

Yours sincerely,

John Broderick

APPENDIX C

TAFE NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT PROJECT:

AN INVESTIGATION INTO THE IMPLEMENTATION OF NATIONAL CORE CURRICULA (N.C.C.)

CASE STUDY QUESTIONNAIRE

CONFIDENTIAL

STUDY AREA:..........

QUESTIONS RELATING TO PROJECT AIM NO.1: TO CONSIDER AND COMPARE THE RANGE OF ALTERNATIVE APPROACHES TO NATIONAL CORE CURRICULA [N.C.C.] DEVELOPMENT.

Q.1 Does the task force approach to the development of National Core Curricula produce more effective curriculum products [i.e. more relevant to the existing and potential needs of industry], than by those which are developed locally by the TAFE Authority in the same study area?

Response: *Please place tick in one box only after reading all the options in (a), (b), (c) and (d)*

(a) The task force approach is more effective ☐

(b) The task force approach is only marginally more effective ☐

(c) The task force approach would produce about the same quality curriculum products as the normal State/Territory curriculum development methods ☐

(d) The task force approach is less effective than that used normally by the State/Territory in developing a curriculum ☐

Q.2 Preamble

Some options to the task force approach are outlined below, including variations to the existing task force model. Do you think the same benefits, which are claimed to flow from the task force approach for students, teachers and other N.C.C. stokeholders, would occur if any (or some) of these optional approaches were adopted?

Three optional approaches are outlined below and are designated as 'A', 'B' and 'C'.

OPTION 'A'

Following the initial submission of a N.C.C. concept proposal and its subsequent approval by the conference of TAFE Directors, a small working party would be set up in the convening State/Territory. The working party would engage in a period of concentrated and comprehensive preparation which would include an interchange of information with curriculum liaison persons in all the relevant TAFE Authorities by means of letters, papers, telephone contact, etc. The working party would present an initial report to the C.P.S.G.

Following the working party's initial report, the C.P.S.G. would establish a N.C.C. task force for the study area and set down the terms of reference for the development of the N.C.C.

The task force would meet initially to discuss and formulate a management/development plan for the N.C.C. project, and from this point the task force would take all further responsibility for the development of the N.C.C., but would set up small working parties (similar to the initial working party in the convening State) in all relevant TAFE Authorities to carry out the ongoing developmental work.

During the period of the development of the N.C.C. syllabus document [if that outcome is the main aim], the N.C.C. task force would hold several teleconferences using loud speaking telephones, and facsimile machines. [This strategy reduces travel and accommodation costs]. Such teleconferences would be prefaced by a period of information exchange by letters, prepared papers, and normal telephoning by the task force members. During the period of development of the N.C.C., the task force convenor would report to the C.P.S.G. at periodic intervals on the progress of the project. The C.P.S.G. would follow its normal oversighting managerial role.

The N.C.C. task force would meet for a second and final meeting to check the N.C.C. syllabus (in draft form) and make recommendations for its adoption and for the further development of associated N.C.C. products, such as nationally determined learning materials (or acceptance of existing materials), text development, N.C.C. assessment strategies, other maintenance of standards mechanisms and a N.C.C. implementation monitoring strategy.

Response: *Please place tick in one box only after reading all the options in (a), (b), (c) and (d)*

(a) Do you consider that the variation to the traditional task force approach as outlined above, would be equally effective in developing a national core curriculum as the traditional task force model?

GENERALLY YES	GENERALLY NO
☐	☐

(b) Do you consider the variation to the task force approach would be only marginally more effective than the traditional task force approach?

YES	NO
☐	☐

(c) Do you consider that the variation to the task force approach would be considerably less effective than the traditional approach?

YES	NO
☐	☐

(d) Do you consider that the variation to the task force approach is worth considering as a viable alternative method to the traditional task force approach?

YES	NO
☐	☐

ALTERNATIVE APPROACH 'B'

A single TAFE Authority, such as the convening State/Territory, to take the full responsibility for the development of the N.C.C. project [i.e. once the concept has been approved]. A N.C.C. development group [State task force?] be established and be representative of the State TAFE Authority's curriculum branch, study area experts and non-TAFE stakeholders. This representative group to be responsible for the N.C.C. development according to a set of specifications nationally determined. the nationally determined N.C.C. development specifications to be obtained during a period of information interchange between the relevant TAFE Authorities and refined by the C.P.S.G., which would set the final terms of reference for the development of the N.C.C. The convening State/Territory C.P.S.G. member (or his/her nominee) be a representative on the N.C.C. development group and to carry out an ongoing interchange with all other members of the C.P.S.G.

Response: *Please place tick in one box only after reading all the options in (a), (b), (c) and (d)*

(a) Do you consider that alternative approach 'B' to the traditional task force method, as outlined above, may be as equally effective as the traditional task force approach?

YES ☐ NO ☐

(b) Do you consider that alternative approach 'B' to be marginally less effective as the traditional task force approach?

YES ☐ NO ☐

(c) Do you consider that alternative approach 'B' to be considerably less effective as the traditional task force approach?

YES ☐ NO ☐

(d) Do you consider that alternative approach 'B' to be worthy of consideration as a viable approach to the development of national core curricula?

YES ☐ NO ☐

ALTERNATIVE APPROACH 'C'

A single Project Officer (perferably from convening State/Territory) be given the task of developing the relevant N.C.C. according to a national determined set of N.C.C. development specifications. The general monitoring of the project to be carried out by a National Advisory Committee, which would meet twice only. Firstly to appraise the project concept and rationale, general development plan, project aims, objectives and methodology. [This first meeting of national project committee to be prefaced by interchange of information between the Project Officer and the individual Project Advisory Committee members.]

The Project Advisory Committee [3-4 members] to be nominated by the C.P.S.G., which would have the main oversighting role and set the refined terms of reference for the project. The National Advisory Committee acting in collaboration with the Project Officer would report periodically to the C.P.S.G.

The Project Officer would carry out all research associated with the development of the NC.C. assisted by ongoing liaison with nominated persons in all relevant TAFE Authorities. The Project Officer to visit all relevant TAFE Authorities for detailed information gathering and general observation of curriculum related matters. It is envisaged that the Project Officer would consult [interview] a range of TAFE and non TAFE stakeholders in each TAFE Authority during the inter- State/Territory visits.

Finally the N.C.C. Advisory Committee would meet in the convening State [or a nominated location] to finalise the draft N.C.C. syllabus and any other associated N.C.C. products [which may be in various stages of development] before making recommendations to the C.P.S.C. for consideration leading to a recommendation to The Conference of TAFE Directors to implement the N.C.C.

The alternative N.C.C. development approach outlined in 'C' would reduce developmental costs to a minimum, consistent with two visits of a relatively small National Advisory Committee to the convening State [or a nominated location]; and one visit to each of the relevant TAFE Authorities by the Project Officer.

Response: *Please place tick in one box only after reading all the options in (a), (b), (c) and (d)*

(a) Do you consider that alternative approach 'C' to the traditional task force method, as outlined above, may be as equally effective as the traditional task force approach? YES ☐ NO ☐

(b) Do you consider that alternative approach 'C' to the traditional task force method to be marginally less effective as the traditional task force approach YES ☐ NO ☐

(c) Do you consider that alternative approach 'C' to be considerably less effective as the traditional task force approach? YES ☐ NO ☐

(d) Do you consider that alternative approach 'C' to be worthy of consideration as a viable approach to the development of National Core Curricula? YES ☐ NO ☐

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STUDY AREA:....................

QUESTIONS RELATING TO PROJECT AIM NUMBER 2: FOR SELECTED N.C.C. TO EVALUATE THE EXTENT OF THE IMPLEMENTATION OF NATIONAL CORE CURRICULA IN ALL STATES/TERRITORIES

Q.1 To what extent has the relevant N.C.C. [syllabus content] been implemented in your State/Territory? *[Please tick one box only]*

(a) Totally implemented ☐

(b) More than 75% implemented ☐

(c) Less than 50% implemented ☐

(d) N.C.C. not implented ☐

Preamble to question:
It is generally accepted that when a N.C.C. syllabus is being implemented in TAFE Authorities, the study area program presentation and structure, the sequencing of the subjects and subject topics and assessment, will vary from one TAFE Authority to another. However the important point in respect to the concept of N.C.C. is that the intention of the N.C.C. planners, designers and developers is accommodated in the curriculum products of the local program.

Q.2 To what extent has the N.C.C. content changed in form and substance in the transition from the N.C.C. syllabus to the relevant TAFE Authority program?

Response: *Place a tick in one box only indicating the degree of change in the curriculum products which you think has occurred in the transition.*

(a) No change in form or substance of the N.C.C. syllabus content. ☐

(b) Minimal change in form and substance of N.C.C. syllabus content. ☐

(c) A moderate level of change in form and substance of N.C.C. syllabus content. ☐

(d) A high level of change in form and substance of N.C.C. syllabus content. ☐

Further comment if required

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Q.3 In respect to the above [Q.2], what are the constraints in your TAFE Authority which have caused changes to the form and substance of the N.C.C. syllabus content products as they are expressed in your local syllabus document, study area teaching program and in the actual delivery of the program? *[Please tick one box only]*

(a) The uniqueness of State/Territory industrial training needs. YES ☐ NO ☐

(b) The specialised nature of the industries which the occupation serves. YES ☐ NO ☐

(c) Lack of major equipment, such as special machines. YES ☐ NO ☐

(d) Lack of capital resources, such as the need to upgrade buildings. YES ☐ NO ☐

(e) Lack of suitable learning materials to adequately implement the N.C.C. YES ☐ NO ☐

(f) Lack of adequate texts to adequately implement the N.C.C. YES ☐ NO ☐

(g) Other constraints: Please describe briefly below in space provided if required.

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Q.4 What is the approximate proportion of N.C.C. syllabus content in your local study area program? *[Please tick one box only]*

(a) 100% N.C.C. in local program ☐

(b) Between 80-90% N.C.C. in local program ☐

(c) Between 60-80% N.C.C. in local program ☐

(d) Between 50-60% N.C.C. in local program ☐

(e) Between 30-50% N.C.C. in local program ☐

(f) Less than 30% N.C.C. in local program ☐

Q.5 What course presentation mode is used in your State/Territory to implement this N.C.C. based course?

Response: *Place a tick in the appropriate box indicating the type of course presentation used to implement the N.C.C. based course [Please tick one box only]*

(a) Subject sequenced and presented by stages or years with theory, graphics and practical individually taught ☐

(b) A systems approach using a modular structure with self paced learning ☐

(c) A form of unitised presentation utilising the integration of theory, graphics, practical ☐

(d) Other course presentation - briefly describe below: ☐

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Q.6 What form of learning materials are used by your college(s) when presenting this relevant N.C.C. based course?

(a) State/Territory [or college] prepared typed notes, work sheets, check lists, practical aids [models] etc., supplemented by lectures, and demonstrations. YES ☐ NO ☐

(b) State/Territory produced self paced learning packages in print form supplemented with film, strip film, video, etc. YES ☐ NO ☐

(c) Nationally developed learning materials, e.g. materials developed (or selected) by a working party of the N.C.C. task force. YES ☐ NO ☐

(d) Other learning materials: Please describe briefly in space below:

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Q.7 What is the most appropriate form of N.C.C. syllabus documentation to enable a TAFE College adequately to implement a N.C.C. based teaching program to ensure that the 'essence' of the N.C.C. product is accommodated in the program? *[Please tick one box only]*

(a) An unaltered minimal N.C.C. syllabus document with broad course aims and objectives and general content areas listed. TAFE college teaching staff to interpret the syllabus in light of local industrial/commercial needs. ☐

(b) A N.C.C. syllabus rewritten into a local short syllabus by TAFE Authority curriculum branch. A fairly short document to allow for college interpretation in light of local industrial/commercial needs. ☐

(c) A N.C.C. syllabus rewritten into a local syllabus form by TAFE Authority curriculum branch. A detailed long syllabus document in teaching program format listing course aims and objectives, subject aims and objectives, practical work aims and objectives, and terminal competencies, etc. Minimal interpretation by college teachers. ☐

(d) Any other form of documentation [Please specify] ☐

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Q.8 Should the implementation phase of N.C.C. based programs be monitored to provide reliable feed back to all stakeholders who have supported its inception and development to the production of a syllabus?

YES	NO
☐	☐

Response: *If the answer above is YES, please tick one box only for (a), (b), (c) and (d)*

(a) State wide monitoring by individual TAFE Authorities through a State determined monitoring strategy such as a formal monitoring unit comprising of say: State C.P.S.G. member, State N.C.C. task force representative and several industrial representatives.

YES	NO
☐	☐

(b) A formal national monitoring unit comprising say: State C.P.S.G. member, National N.C.C. task force convenor, State N.C.C. task force member and several State industrial representatives.

YES	NO
☐	☐

(c) A college based monitoring unit comprising say: State task force member and senior study area teacher in the college.

YES	NO
☐	☐

(d) Other. [Please specify] YES ☐ NO ☐

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(e) No implementation monitoring YES ☐ NO ☐

Q.9 If some form of N.C.C. implementation monitoring is seen to be desirable to ensure that the 'spirit' or 'essence' of the N.C.C. is accommodated in a N.C.C. based local program, what 'style' of implementation monitoring should be carried out?
[Please tick one box only]

(a) A co-operative, advisory, consultative approach. ☐

(b) Generally co-operative, advisory and consultative, but with some prescription in certain areas. ☐

(c) To be implemented in accordance with a set of firm guidelines. ☐

(d) A supervisory group (unit) in accordance with firm guideslines. ☐

(e) Other. [Please specify]

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Q.10 Do you have any knowledge of the extent of the relevant N.C.C. implementation in the other States/Territories? YES ☐ NO ☐

Response: *If your answer to above is YES, please tick one box for (a), (b) and (c)*

(b) Is the relevant N.C.C. implemented in most States/Territories YES ☐ NO ☐

(c) Is the relevant N.C.C. implemented in only a minority of States/Territories YES ☐ NO ☐

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STUDY AREA:....................

QUESTIONS RELATING TO PROJECT AIM NO. 3: FOR SELECTED N.C.C., TO EVALUATE WHAT IMPACT N.C.C. HAS HAD ON THE MAINTENANCE OF COURSE STANDARDS BETWEEN COLLEGES AND BETWEEN AUTHORITIES

Preamble:
It has been claimed by the proponents of N.C.C. that N.C.C. based programs produce quality curriculum products which are more responsive to the training needs of industry and commerce than locally produced programs. The reasons given vary, but the most common being that N.C.C. products are more relevant because of the national perspective of the core course. Consequently a large number of N.C.C. have been developed in recent years. There has been an ongoing debate in TAFE as to whether there should be some form of nationally determined monitoring of N.C.C. course standards during and after the N.C.C. implementation phase. [Questions on the national monitoring of the N.C.C. implementation phase have been covered above]. The following questions relate specifically to the need for strategies and/or mechanisms for the maintenance of N.C.C. standards, whereas the earlier questions addressed the extent of the N.C.C. implementation in the relevant TAFE Authorities.

Q.1 Should there be a strategy for monitoring the maintenance of N.C.C. standards?

YES	NO

Response: *If the answer above is NO, then please pass on to question number 3*
If the answer above is YES, please respond to the following in question number 2

Q.2

(a) Should the monitoring of the maintenance of N.C.C. based courses in all relevant TAFE Authorities be a matter for a national TAFE group?
[If your response to question number 2, part (a) is NO, then pass on to question number 3]

YES	NO

(b) If you consider that the periodic monitoring of N.C.C. based courses should be done by a nationally determined group, should each of the following be members of the group?

. The convenor of the N.C.C. task force.

YES	NO

. The State/Territory C.P.S.G. member or his/her nominee.

YES	NO

. Two representatives of the relevant industry from within the State being monitored.

YES	NO

. A senior study area teaching person from within the State/Territory being monitored. YES ☐ NO ☐

. Other. [Please specify] YES ☐ NO ☐

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(c) How should a nationally determined maintenance of standards unit [group] carry out its role? *[Please tick one box only]*

. Co-operative, advisory, consultative approach? YES ☐ NO ☐

. Generally co-operative, advisory, and consultative, but with some prescription in certain areas? YES ☐ NO ☐

. Fully prescriptive YES ☐ NO ☐

. Other. (Please specify) YES ☐ NO ☐

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Q.3 Do you consider that the changes of form [and sometimes substance] N.C.C. products undergo in the transition from the N.C.C. syllabus document to the re-written local syllabus and finally to the college program at classroom level, seriously affects the quality of the curriculum product? [i.e. its responsiveness to the industrial needs as perceived by the N.C.C. designers and developers]. YES ☐ NO ☐

Please comment

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Q.4 Do you consider a nationally determined student assessment strategy for N.C.C. based courses to be effective in helping to maintain N.C.C. standards?

YES ☐ NO ☐

Response: *If your answer to above is YES, please respond to the following questions*

Q.5 If there were to be a nationally determined student assessment strategy for N.C.C., should it be moderated?

YES ☐ NO ☐

Response: *If your answer above is YES, should that be done:*

(a) by a national group?

YES ☐ NO ☐

(b) by the relevant TAFE Authority?

YES ☐ NO ☐

Q.6 Do you consider that the establishment of nationally determined student assessment banks would be a positive and useful strategy in helping to maintain N.C.C. standards across all relevant TAFE Authorities?

YES ☐ NO ☐

Q.7 If your response to question number 6 is YES, should student practical test projects and assessable home assignments be included in the nationally determined assessment item bank?

YES ☐ NO ☐

Q.8 How often should nationally determined student assessment item banks be reviewed and updated in view of industrial training needs changes? *[Please tick one box only]*

. An ongoing appraisal by N.C.C. task force convenor [or nominee], i.e. by the convening State/Territory working in collaboration with relevant liaison persons in other TAFE Authorities. ☐

. Every two years [as above]. ☐

. A longer period before review [please comment on period]. ☐

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Q.9 Would the exchange of student assessment [examination] question papers and a random selection of student responses to the questions, among relevant TAFE colleges on a national scale, be a positive and useful strategy to assist in the maintenance of N.C.C. standards?

YES ☐ NO ☐

Q.10 Should all relevant N.C.C. projects be prefaced by a nationally determined industrial/commercial training needs analysis to ensure that N.C.C.s are responsive and relevant to existing and potential training needs of such stakeholders [i.e. provided such information is unavailable from other (existing sources].

YES ☐ NO ☐

Q.11 To what extent have the following resource constraints, which exist to varying degrees in most TAFE Authorities, affected the maintenance of N.C.C. course standards?:

(a) Lack of capital resources such as the need to update buildings [i.e. workshops, labs, etc.].

YES ☐ NO ☐

(b) Lack of major equipment such as special machines in certain areas of the curriculum.

YES ☐ NO ☐

(c) Lack of suitable learning materials such as self paced learning packages, self assessment schemes, etc. [Some Authorities are attempting to deliver N.C.C. based courses by 'systems approach'].

YES ☐ NO ☐

(d) Lack of suitable moderately priced texts.

YES ☐ NO ☐

(e) Need for updating of some areas of knowledge and skill by teachers.

YES ☐ NO ☐

(f) Other constraints. [Please comment]

YES ☐ NO ☐

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STUDY AREA:......................

QUESTIONS RELATING TO PROJECT AIM NUMBER 4: FOR SELECTED N.C.C., TO EVALUATE THE COST EFFECTIVENESS OF DEVELOPING AND IMPLEMENTING CORE CURRICULA

Q.1 Preamble

Note: The intention of the questions relating to Project Aim number 1 above, is to obtain responses in respect to the effectiveness of N.C.C. produced by the traditional task force approach [i.e. the relevance of N.C.C. to the current and potential training needs of industry/commerce]. In the questions listed below the intention is to obtain views on comparative costs, as well as course effectiveness.

Do you consider that the apparent high costs associated with the task force approach to the development of national core curricula are balanced by the benefits arising from a nationally determined core curriculum implementation in your TAFE Authority?

Response: *Please place one tick only in the appropriate box for (a), (b), (c), (d) and (e)*

(a) Do you consider that the benefits to students, teachers and non TAFE stakeholders justify the costs of developing a nationally determined core curriculum?

GENERALLY	
YES	NO

(b) The local development of a study area curriculum would be cheaper and produce equally effective curriculum products.

YES	NO

(c) The local development of a study area curriculum would produce an equally effective curriculum but would cost more.

YES	NO

(d) The local development of a study area curriculum would produce less effective curriculum products, but the cost would be about the same level.

YES	NO

(e) Further comment if required by respondent:

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Q.2 Do you consider that any of the alternative approaches to the traditional task force model outlined above [see questions relating to Project Aim number 1 (Q.2)], should be considered by the C.P.S.G. as a means of producing N.C.C. more cost effectively?

YES	NO
☐	☐

__Response:__ *__Please place a tick in the appropriate box__*

If your reponse to the above question [Q.2] is YES indicate by ticking the appropriate box below the alternative approach you consider to be more cost effective.

(a) Alternative approach 'A' ☐
[See questions relating to Project Aim 1]

(b) Alternative approach 'B' ☐
[As above in (a)]

(c) Alternative approach 'C' ☐
[As above in (a)]

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STUDY AREA:......................

QUESTIONS RELATING TO PROJECT AIM NUMBER 5: TO EVALUATE THE BENEFITS TO STUDENTS AND TO TEACHERS OF NATIONAL CORE CURRICULA

Q.1 **Are the terminal competencies acquired by graduates of a N.C.C. based course better suited to meet the current and perceived potential industrial/commercial work tasks than if they were trained/educated under the earlier locally developed study area program?**

YES	NO

Response: *Please place one tick only in the appropriate box*

[If the answer above is NO, please pass on to question number 3]

Q.2 **If your response to question 1 is YES, what factors do you consider cause the N.C.C. based program to be more effective in performing the work tasks?**

Response: *Please place a tick in the appropriate box to indicate the order of importance to the causes listed below (a), (b), (c)*

	HIGHLY IMPORTANT	IMPORTANT	MARGINALLY IMPORTANT	NOT IMPORTANT
(a) **Because a N.C.C. is the result of a national cross fertilization of ideas and opinions based on a reasonably high degree of content commonness.**	☐	☐	☐	☐
(b) **Because a N.C.C. has (in most cases) been prefaced by an industrial/occupational analysis [nationally determined] and has consequently addressed current and potential industrial/ occupational outcomes.**	☐	☐	☐	☐
(c) **Because N.C.C. based programs have some national and State industrial/commercial representation [e.g. C.P.S.G., task force, working parties]**	☐	☐	☐	☐

Q.3 **One of the claims made by proponents of N.C.C. is that N.C.C. based programs allow for a high degree of portability of qualifications, i.e. better national mobility for N.C.C. graduates.**

Response: Indicate by placing a tick in the appropriate box your opinion as to the importance of graduate national mobility for this study area [tick one box only]

(a) Mobility highly relevant to this study area. ☐

(b) Mobility marginally relevant to this study area. ☐

(c) Mobility not an important issue as far as this study area is concerned. ☐

Q.4 The following points have been claimed to be benefits to teachers following the implementation of a N.C.C. based program

Response: Please indicate the order of importance [in respect to benefits to teachers] by placing a tick in the appropriate boxes after first reading all the points listed as (a), (b), (c), (d), (e), (f), (g) and (h)

	HIGHLY BENEFICIAL	BENEFICIAL	MARGINALLY BENEFICIAL	NO BENEFIT
(a) Staff development on a national scale for participants on N.C.C. task forces and working parties due to the exchange of ideas.	☐	☐	☐	☐
(b) A more industrially/occupationally relevant course due to the national scope of the N.C.C. based program.	☐	☐	☐	☐
(c) A more enhanced TAFE image both State and national, due to the higher expectations of industry/commerce [i.e. a higher TAFE credibility] for TAFE generally.	☐	☐	☐	☐
(d) The feeling of ownership, by all participants, in a nationally applicable study area program [i.e. knowing that the other relevant States/Territories are delivering essentially the same curriculum products stemming from the N.C.C.].	☐	☐	☐	☐
(e) Access to nationally determined student assessment strategies, such as assessment item banks [where they exist].	☐	☐	☐	☐
(f) Availability of nationally utilised texts and references [in some instances].	☐	☐	☐	☐
(g) N.C.C. tends to give effect to common national standards.	☐	☐	☐	☐
(h) The implementation of a N.C.C. based program tends to generate improved dissemination of information in respect to the particular study area.	☐	☐	☐	☐

Q.5 The following points have been claimed to be benefits to students following the implementation of a N.C.C. based program

Response: Please indicate the order of importance [in respect to perceived benefits to students], by placing a tick in the appropriate boxes after first reading all points listed as (a), (b), (c), (e), and (f)

	HIGHLY BENEFICIAL	BENEFICIAL	MARGINALLY BENEFICIAL	NO BENEFIT
(a) Graduate/student terminal competencies in knowledge and skill, which are more relevant and effective in performing work tasks than earlier course which the N.C.C. replaces.	☐	☐	☐	☐
(b) Portability of vocational qualifications of graduates on a national scale.	☐	☐	☐	☐
(c) Portability of students who transfer from one State/Territory to another. The claim being that the commonness of course content [ofter adversely affected by variations in N.C.C. subject sequencing between TAFE Authorities], will allow for better slotting in to the relevant N.C.C. based program in another State/Territory.	☐	☐	☐	☐
(d) Where nationally approved and utilised study area texts are available, students knowledge and skills [in respect to the study area] will have national application as far as the common core is concerned.	☐	☐	☐	☐
(e) The availability of nationally approved student learning materials [in some areas these products are in existence or are being developed] e.g. student self paced learning packages [where applicable].	☐	☐	☐	☐
(f) Computer assisted learning strategies nationally approved and available. [Such aids already exist in some States].	☐	☐	☐	☐
The respondent is invited to comment further on perceived benefits to students arising out of the implementation of a N.C.C. based program.	☐	☐	☐	☐

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STUDY AREA:.......................

QUESTIONS RELATING TO PROJECT AIM NUMBER 6: TO GATHER THE OPINIONS OF SELECTED REPRESENTATIVES OF INDUSTRY/COMMERCE TO RELEVANT NATIONAL CORE CURRICULA

Q.1 Do you consider that employers in the industry/occupation covered by the N.C.C. relevant to this study area are generally aware that their employees are being trained by a N.C.C. based course?
[Please tick appropriate box]

YES	NO

Q.2 To what extent do 'aware employers' expect N.C.C. to be implemented?
[Please tick appropriate box]

TOTALLY	
PARTIALLY	
NOT IMPLEMENTED	

Q.3 If you consider many (some) relevant employers are aware of the implementation of a N.C.C. based course in their vocational area, do they generally recognise positive benefits to their industry/occupation stemming from the implementation?
[Please tick appropriate box]

YES	NO

Q.4 Of those employers who are aware of N.C.C., and do recognise positive benefits from N.C.C. implementation, what outcomes of the N.C.C. implementation do they see to be most beneficial to them as employers?

Response: *Please place a tick in the appropriate box indicating the order of importance after reading all questions (a), (b), (c), (d), (e) and (f)*

	HIGHLY IMPORTANT	IMPORTANT	MARGINALLY IMPORTANT	NOT IMPORTANT
(a) More effective student/graduate terminal competencies in study area knowledge and skill to perform the current industrial/occupational work tasks than those stemming from earlier courses.	☐	☐	☐	☐
(b) A better, more relevant form of training in that the graduate will have a better potential for adjusting to technological changes in the industry concerned.	☐	☐	☐	☐
(c) The development of work attitudes leading to an improvement in job satisfaction.	☐	☐	☐	☐

	HIGHLY IMPORTANT	IMPORTANT	MARGINALLY IMPORTANT	NOT IMPORTANT
(d) The potential for better productivity which may be generated through N.C.C. based courses.	☐	☐	☐	☐
(e) The employee is more aware of national standards due to national scope of N.C.C.	☐	☐	☐	☐
(f) An improvement in the portability of relevant knowledge and skill across Australia.	☐	☐	☐	☐

Q.5 There are a number of channels through which N.C.C. information exchange [feed back] takes place at the interface between industry and TAFE. Please indicate the order of effective N.C.C. feedback by placing a tick in the appropriate box below, but only after reading all questions (a), (b), (c), etc.

'A' Formal Interchange [feed back] Network	HIGHLY EFFECTIVE	EFFECTIVE	MARGINALLY EFFECTIVE	NOT EFFECTIVE
(a) Interchange of N.C.C. information between TAFE and industry between members of TAFE curriculum advisory committees.	☐	☐	☐	☐
(b) State/Territory statutory industrial training bodies [e.g. I.C.T.C.] representation on TAFE curriculum committees and vice-versa [including N.C.C. task force participation].	☐	☐	☐	☐
(c) Industry representatives on TAFE college councils.	☐	☐	☐	☐
(d) Official liaison programs such as TAFE teacher release to relevant industry for a period of time to update study area knowledge and skills.	☐	☐	☐	☐
(e) State/Territory [sometimes national] Statutory Regulatory Authorities [TAFE/industry licensing committees of the Authorities].	☐	☐	☐	☐

'B' Informal TAFE Industry Network

	HIGHLY EFFECTIVE	EFFECTIVE	MARGINALLY EFFECTIVE	NOT EFFECTIVE
(a) TAFE teachers/industry ongoing informal interchange by visits to industry and vice-versa.	☐	☐	☐	☐
(b) Social interaction between individuals from TAFE and industry.	☐	☐	☐	☐
Respondents are invited to comment further on the formal and informal interaction between TAFE and industry/commerce.	☐	☐	☐	☐

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CONFIDENTIAL

STUDY AREA:......................

QUESTIONS RELATING TO PROJECT AIM NO. 7: TO EVALUATE THE ROLE OF THE CURRICULUM PROJECT STEERING GROUP [C.P.S.G.] SET UP BY THE CONFERENCE OF TAFE DIRECTORS, IN THE DEVELOPMENT AND IMPLEMENTATION OF N.C.C.

Q.1 **In your opinion should the C.P.S.G. be involved across the full spectrum of a national core curriculum activity, i.e. from the planning, designing and development to the implementation phase.**
[Please tick appropriate box]

YES	NO
☐	☐

Q.2 **Should the C.P.S.G. become involved in sponsoring some form of national monitoring of the N.C.C. implementation in all relevant TAFE Authorities?**
[Please tick appropriate box]

YES	NO
☐	☐

Q.3 **Do you consider that the N.C.C. selection criteria [attached to the questionnaire] used by the C.P.S.G., should be considered only as a set of guidelines, as there will always be some study areas which will not meet all the selection criteria as now set?**
[Please tick appropriate box]

(a) C.P.S.G. N.C.C. selection criteria as guidelines only.

YES	NO
☐	☐

(b) C.P.S.G. N.C.C. selection criteria as a firm set of selection criteria.

YES	NO
☐	☐

Q.4 What effect do you consider the C.P.S.G. has had on the development and implementation of N.C.C. since the C.P.S.G. was formed in 1982?

Response: *Please place a tick in the appropriate box to indicate your order of importance regarding the questions (a), (b), (c), (d) and (e)*

	HIGHLY IMPORTANT	IMPORTANT	MARGINALLY IMPORTANT	NOT IMPORTANT
(a) A positive improvement in the quality of N.C.C. products due to the 'global' input of senior experienced curriculum managers.	☐	☐	☐	☐

	HIGHLY IMPORTANT	IMPORTANT	MARGINALLY IMPORTANT	NOT IMPORTANT
(b) Task forces have had the benefit of sound even handed management, which took into consideration the most effective spread of scarce resources available to TAFE.	☐	☐	☐	☐
(c) Have been responsible for the setting up of more relevant and effective task forces than those which may have emerged without the knowledge and experience of the C.P.S.G.	☐	☐	☐	☐
(d) Have provided an essential screening role between N.C.C. task forces and the conference of TAFE Directors.	☐	☐	☐	☐
(e) May have hindered some task forces in attempting to achieve goals which they considered to be advantageous to their N.C.C. study area.	☐	☐	☐	☐
The respondent is invited to make further comment in respect to the role of the C.P.S.G. in the development of N.C.C.	☐	☐	☐	☐

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THANK YOU FOR YOUR CO-OPERATION IN RESPONDING TO THE LARGE NUMBER OF QUESTIONS IN THIS QUESTIONNAIRE. YOUR CONSIDERED OPINIONS WILL BE CAREFULLY ANALYSED.

PLEASE SEND QUESTIONNAIRE (WHEN COMPLETED) TO:

Mr John Broderick,
Project Officer,
TAFE National Centre for Research and Development,
296 Payneham Road,
Payneham. S.A. 5070

The Curriculum Projects Steering Group [C.P.S.G.] is a Committee of the Australian Conference of TAFE Directors which was established in 1982 to provide advice to the Directors on national curriculum projects. Traditionally the role of the C.P.S.G. has been the oversighting, co-ordinating and monitoring new and ongoing national curriculum projects.

Membership of the C.P.S.G. is as follows:

- a representative of the Conference of TAFE Directors, who is the Chairperson
- a senior Curriculum Officer from each of the eight Australian TAFE Authorities
- a representatives of the TAFE National Centre for Research and Development [one of which is the Secretary of the C.P.S.G]
- a senior Curriculum Officer who is a nominee of the National Working Party of Women's Advisers in TAFE
- a nominee of the Commonwealth State Training Advisory Committee [C.O.S.T.A.C.]

Selection Criteria used by C.P.S.G. to select National Curriculum Projects for development

- A national approach is important for the industry concerned and the clients TAFE serves.
- A national approach will lead to a better quality curriculum product.
- A national approach will lead to a substantial saving in the cost of developing a curriculum product.
- All TAFE Authorities agree on the project as a priority project.
- The vocational area is a developing one, with a consequent need for TAFE to respond rapidly on a national basis.
- The study area is economically and/or socially important for Australia.

MINIMUM CURRICULUM DOCUMENTATION REQUIREMENTS

COURSE TITLE

COURSE CLASSIFICATION STREAM FIELD

AWARD

BROAD AIMS OF COURSE

SUGGESTED FACILITIES AND MAJOR ITEMS OF EQUIPMENT

ENTRY LEVEL

SUGGESTED COURSE HOURS

COURSE STRUCTURE-SUBJECTS/UNITS/MODULES, SEQUENCE, DURATION, VALUE

SYLLABUS -

FOR EACH SUBJECT/UNIT/MODULE:

- TITLE
- EXEMPTIONS/CROSS CREDITING
- PRE-REQUISITES
- CLASS CONTACT HOURS
- AIMS
- TOPICS, SUGGESTED TIME
- KEY LEARNING OBJECTIVES
- VALUE AND ASSESSMENT OF KEY LEARNING OBJECTIVES
- SUGGESTED REFERENCES, A/V MATERIALS AND/OR EQUIPMENT

PROPOSED COURSE MAINTENANCE PROCEDURES

APPENDIX E

NATIONAL CURRICULUM PROJECTS

	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Aborigines and the Law	SA	Dec 85			5 000						Withdrawn - Funds returned to CTEC
Aboriginal Journalists & Broadcasters	NT	June 86				36 500					$22 000 of uncommitted funds to be used
Aboriginal Technical Workers	NT	June 86				35 600					$22 000 of uncommitted funds to be used See above Aboriginal Journalists
Aboriginal Youth Workers	NT	June 86				5 000 34 000					$22 000 of uncommitted funds to be used See above Aboriginal Journalists
Accounting											See Business Studies
Accounting-External Studies	SA & VIC	Sept 84		6 500							
Adult Literacy	SA	May 82	14 000 5 000	20 000	5 000			14 000 Centre (CP) (to be repaid)			
Aircraft Sheetmetal	VIC	Nov 82									$14 500 request Oct 82. Not approved?
Aircraft Trades	VIC	May 82	12 000								
Alternative Energy											See Renewable Energy
Animal Care	NSW	Sept 85			5 000						
Audio-Visual Materials Housekeeping	QLD	Sept 86				27 000					
Automotive	SA	May 82 Feb 82	12 000		None					Dec 84	Dec 83 $8 000 unused

	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Automotive Electrical/ Electronics	SA	Sept 84		5 000							
Automotive Mechanics	VIC		2 700							Dec 84	
Automotive Studies Tech.	VIC	Sept 85			12 000	5 000*					*86 funds
Aviation Courses	SA & NSW	Dec 86									Participate in CTEC sponsored project
Banking and Finance	SA	Dec 85						DEIR?			
Beauty Therapy	VIC	Sept 84		8 000							
Building Industry (Non Trades)	VIC	May 82	29 000	5 000				NTC?	Dec 85	June 86	
Business Electronic Information Processing	QLD	June 85									See Office Automation?
Business Studies (Accounting)	NSW	May 82	13 000	3 000			1 500*		Dec 84	Dec 84	*84 unallocated funds (June 84)
Butchering	SA	June 83		3 000			3 000*				*Uncommitted 84 funds
Carpentry & Joinery										1980?	
Cartography	WA	Sept 84		Not Funded							Deferred until 1986 Not yet commenced
Child Care	TAS VIC	May 82	14 000 7 500	5 000			900*		July 85	Dec 84	*Unallocated 84 funds (June 84)
Childcare Resources Manual	QLD	June 86				7 800*					*86 Funds
Composing & Graphic Production	SA	Dec 85									Deferred
Computing Assisted Learning Basic Adult Education	SA	Sept 84									Centre Commissioned Project

	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Computing Component Across Courses	NSW	May 82	12 300								Also Centre CP
Computer Controlled Machines	QLD	June 85			6 000						$6 000 request. Sept 85. Not approved
Computer Integrated Manufacture	NSW & SA	Dec 86				2 000*					*Development Funds
Computer Software Guidelines	NSW	Sept 84									Centre commissioned project
Construction (Non Trades)											See Building (Non Trades)
Customs		79								1982	
DACUM	QLD	June 1985									Centre Commissioned Project (video)
Electrical Trades	WA	Feb May 82	6 000 3 250						Dec 84	Dec 84	
Electronics	SA ACT	Nov 82	1 000 15 000	5 000		12 000		12 000 ITC*			*June 86: National Electrical & Electronic ITC
Energy Management	WA & NSW	Dec 86				2 000					
Engineering (Middle Level)	SA	May 82	1 000								Not to be considered again until Centre Project complete
Farm Skills	WA	May 82	5 000 7 000	5 700				NT funding?	Dec 85		
Fire Technology	VIC	Dec 86				37 000					
Fitting & Machining	SA	May 82 Feb	3 000						83	Sept 83	Dec 83: $1, 580 remaining

	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Fitting & Machning (Apprentice Area)*	SA					5 000					*Proposal held in abeyance. Funds for consultant to prepare report on future training and changing needs in metal industries
Floristry	VIC	Dec 86				2 000*					$18 000 to be earmarked *$2 000 '86 funds
Fluid Power Resources	VIC	Sept 84		2 000	7 250						
Footwear		79							82		
Foundry	VIC	June 83		12 000							
Geoscience											See Mining and Geoscience
Graphic Images	NSW	Sept 84									Possible Centre Commissioned Project
Hairdressing	SA	June 83	3 000	1 500					Mar 86		
hairdressing Learning Materials	SA	June 86									
Horticulture	VIC	May 82 Nov 82	14 000	16 860	25 000*	7 000		Sept 86			$3 110 of $25 000) 86 reserves
Hydrography		79							82		
Information Technology	VIC	Dec 85				12 000		DEIR?*			If funding received from DEIR, it be treated as re-imbursement

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	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Insurance	VIC	Feb 83						20 000*	July 85	Sept 86	*Australian Insurance Institute
Interpreters of Deaf	VIC	June 85			3 000		4 000 1 500*				*Uncommitted 85 funds (Sept 85)
Learning Resources Housekeeping	NSW	June 86									
Library Technician	NSW	June 83	8 000						1986		
Meat Inspectors	ACT	Dec 86				5 000					
Metal Fabrication & Welding	QLD VIC	May 82 Feb 82	9 300							Sept 83	Dec 83: $3, 429 remaining
Mining Study & Geoscience	WA	June 83							1985		
Mortar Trades	WA	Sept 86				5 000*					*86 Funds
Navigation		79							82		
New Technology Areas	SA	June 85			6 000						$6 000 requested Sept 85 not approved
Occupation Health & Safety	QLD	June 86				24 000					
Office Automation	QLD	Dec 85						DEIR?			See Information Technology
Optical Mechanics		?81							June 83		No Central funding
Patternmaking (Fashion)	NSW	Sept 84									Deferred Dec 84
Pest & Weed Control	SA	Sept 84		3 000					Sept 86		

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	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Plastics	VIC	June 83	13 300	15 000	15 000*			1 500-Mar 86 National Plastics Ind.			*Dec 85 $4 000 of $15 000 85 funds
Plumbing & Draining	SA	Feb 82		?						Dec 84	No TAFEC funding 85
Printing	TAS	June 83 Feb 83									No TAFEC funding 85
Quality Control	SA & NSW	June 83	7 500						Dec 85		
Real Estate	QLD	June 83	12 100	8 000				8 000? REIA	Sept 86		
Real Estate-External Studies	?	Sept 84									Deferred until Acc. External Studies developed
Refrigeration/Air Conditioning	NSW	Nov 82	4 000	2 500	6 000						
Refrigeration/Air Conditioning/Media Materials	SA	Dec 86				9 600					
Renewable Energy (Alternative Energy)	QLD	Sept 85		5 600	25 000				Sept 86		
Residential Care	NSW	June 83		3 000	32 000*						*$10 000 from uncommited funds 85
Role of TAFE in Foreign Aid	?	Sept 84						ADAB?			
Safety in TAFE Courses		June 86									See Occupational Health & Safety
Secretarial Studies	QLD	June 83 May 82	8 000	5 385					July 85	Dec 84	
Sheetmetal	VIC	May 82 Feb 82	5 800	1 000			1 000*		June 83	Sept 83	*Unallocated 84 funds (June 84)

	CONVENOR	PROJECT SUGGESTED	FUNDED 83/84	FUNDED 85	FUNDED 86	FUNDED 87	EXTRA FUNDING	OUTSIDE FUNDING	DATE COMPLETED	BEING MONITORED	NOTES
			$	$	$	$	$	$			
Sheetmetal Resource Material	VIC	May 82									$12 500 request Oct 82. Not approved
Small Business	VIC	June 83	10 000	7 000				83-Dept. Of Ind (84-NTC?)			*Co-op Funding Dept of Ind & Comm & TAFE $10 000 each
Social Attitudinal & Skills Transfer - Mature Aged Persons	QLD	Sept 84									Possible CP
Social & Community Services	VIC	Dec 86									
Surveying	NT	May 82	8 000	500					Dec 84?		
Timber Technology											See Wood Technology
Trading Standards	SA										See Weights & Measures
Transport - Electrical/ Electronics	SA	June 83			40 000						
Travel Courses	VIC	June 85			14 000	4 000					
Weights & Measures (Trading Standards)	SA	?*$							July 85	1986	Industrial Funding 84?
Wood Technology	SA	May 82	10 000	10 000			1 680*	MBD?	Dec 84?	Sept 83	*84 uncommitted funds
Wool Classing	?	Sept 84		6 000			6 000*	AWC/Dec 85 2 000			*Uncommitted 85 funds (Sept 85)
Women's Access Resources	QLD	Sept 84		17 683					Sept 86	Dec 86	
Women at Work	SA	June 83	10 500	5 750			2 000*				*84 uncommitted funds

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